

## APPLICATIONS FOR ADMISSION AND FOR TRANSFER

The Constitution provides that the Board of Direction shall elect or reject all applicants for *Admission* or for *Transfer*, and, in order to determine justly the eligibility of each candidate, the Board must depend largely upon the Membership for information.

This list is issued to members in every grade for the purpose of securing all such available information, and every member is urged to scan carefully each monthly list of candidates and to furnish the Board with data in regard to any applicant which may aid in determining his eligibility. It is the *Duty* of all *Members* to the *Profession* to assist the Board in this manner.

It is especially urged, in communications concerning applicants, that errors in the record be pointed out and a *Definite Recommendation as to the Proper Grading in Each Case* be given, inasmuch as the grading must be based upon the opinions of those who know the applicant personally, as well as upon the nature and extent of his professional experience. If facts exist derogatory to the personal character or to the professional reputation of an applicant, they should be promptly communicated to the Board. *Communications Relating to Applicants are considered by the Board as Strictly Confidential.*

The Board of Direction will not consider the applications herein contained from residents of North America until the expiration of thirty (30) days, and from non-residents of North America until the expiration of ninety (90) days from January 15, 1931.

### MINIMUM REQUIREMENTS FOR ADMISSION

Grade	General Requirement	Age	Length of Active Practice	Responsible charge of work
Member	Qualified to design as well as to direct work	35 years	12 years*	5 years
Associate Member	Qualified to direct work	27 years	8 years*	1 year
Junior	Qualified for sub-professional work	20 years†	4 years*	
Affiliate	Qualified by scientific acquirements or practical experience to co-operate with engineers	35 years	12 years*	5 years
Fellow	Contributor to the permanent funds of the Society			

\* Graduation from a school of engineering of recognized reputation is equivalent to 4 years active practice.

† Membership ceases at age of 33 unless transferred to higher grade.

# LIST OF APPLICANTS.

Names and Addresses of Applicants for Admission and for Transfer on this List,  
Arranged Alphabetically.

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The fact that applicants give the names of certain members as references does not necessarily mean that such members endorse.

The number in the center above each record indicates the serial number of the applicant for the current year, and that at the left the district in which he resides.

The abbreviations in *Italics* represent, respectively, *TT*, Total Time; *SP*, Sub-Professional Work; *P*, Professional Work; *RC*, Responsible Charge; *D*, Design. The figure for Total Time is determined by adding one-half the time spent in Sub-Professional Work to the time spent in Professional Work. The figures showing the amount of time spent in Responsible Charge and on Design are the estimate of the Applicant. The allowance of four years for graduation or of one-half of a year for each academic year successfully completed in an engineering college without graduation is included in Total Time and Professional Work.

## FOR ADMISSION

1

(9) ANDERSON, WILLIAM WAYNE, 229 Highland Ave., Ashland, Ohio. (Age 35. Born Medina, Ohio.) 1918 B. C. E., Ohio State Univ. *TT* 4: *P* 4.—1919 to 1921 Draftsman and Engr., The Burger Iron Co., Akron, Ohio, structural steel (buildings) and field engineering for erection. *TT* 1.5: *SP* 0.3: *P* 1.3: *RC* 0.7: *D* 0.5.—1921 to 1923 Asst. Engr. with County Surveyor, Medina County, Ohio, on design of county and state highways, including bridges. *TT* 1.9: *P* 1.9: *RC* 1: *D* 1.5.—1925 to 1929 County Surveyor, Medina County, and Res. Engr., Ohio State Highway Dept., on design and construction of county and state highways. *TT* 3.4: *P* 3.4: *RC* 3.4: *D* 3.—1929 to date Div. Engr., Ohio State Highway Dept., on maintenance and construction of state highways in Div. No. 3 (eight counties), northern Ohio. *TT* 1.9: *P* 1.9: *RC* 1.9: *D* 0.9.—*TT* 12.7: *SP* 0.3: *P* 12.4: *RC* 7: *D* 5.9. Refers to R. F. MacDowell, C. T. Morris, F. L. Raschig, C. E. Sherman, R. H. Smith, F. E. Swineford, R. N. Wald.

2

(11) BANTHAF, EUGEN, 672 Chamber of Commerce Bldg., Los Angeles, Cal. (Age 31. Born Gerstetten, Wurtemberg, Germany.) 1922 Diplom-Ingenieur, Technische Hochschule (Univ.), Stuttgart, Germany. 1925 Regierungsbaumeister (German Govt. Officer). 1926 Dr. rer. pol., Frankfurt Univ. *TT* 4: *P* 4.—May 1922 to Jan. 1924 with Designer (7 months) and Asst. Supt. of bridge construction plant (1 year), Gutehoffnungshutte (steel mill), Oberhausen, Germany. *TT* 1.6: *P* 1.6: *RC* 1.—April 1926 to Nov. 1927 Asst. Mgr., Sudwest-deutscher Kanalverein, Stuttgart, in responsible charge of engineering problems. *TT* 1.5: *P* 1.5: *RC* 1.5.—Nov. 1927 to Aug. 1928 Asst. Chf. Engr., Sheet Piling Dept., Vereinigte Stahlwerke A. G., Dortmund, Germany. *TT* 0.8: *P* 0.8: *RC* 0.8.—Sept. 1928 to date Pacific Coast Mgr., Sheet Piling Corporation, Ltd., New York City. *TT* 2.3: *P* 2.3: *RC* 2.3.—*TT* 10.2: *P* 10.2: *RC* 5.6. Refers to A. F. Barnard, P. Bauman, O. A. Piper, R. D. Van Alstine, J. R. West.

3

(11) BELLIVEAU, PAUL RICHARD MOUSSEAU, Pacific Electric Bldg., Los Angeles, Cal. (Age 31. Born Hull, Que., Canada.) 1930 B. S. in C. E., Univ. of Southern Cal. *TT* 4: *P* 4.—Sept. 1917 to April 1920 with Canadian Northern Ry. Co. and Canadian National Rys., Capreol, Ont., Canada, on construction and maintenance. *TT* 1.3: *SP* 1.3.—Sept. 1930 to date with Union Pacific R. R., Los Angeles, Cal., at present in Constr. Dept. *TT* 0.2: *SP* 0.2.—*TT* 5.5: *SP* 1.5: *P* 4. Refers to R. M. Fox, D. M. Wilson.

4

(1) BILDE, NILS TAGE RAGNALD, Järpstigen 11, Alsten, Stockholm, Sweden. (Age 44. Born Helsingborg, Sweden.) 1909 C. E., Chalmersska Inst., Gotenburg, Sweden. *TT* 4: *P* 4.—2 years (prior to graduation) Draftsman and Recorder at Hogonas-Billesholms A. B.—April 1909 to March 1910 Control Engr. at Gotenburg Harbor, on building of Sanne-gardshamnen, principally on under-water columns, also on designs for new control harbor.

**TT 0.7: SP 0.2: P 0.5: D 0.5.**—March 1910 to Sept. 1913 Dist. Asst. Engr. at Stockholm Harbor, on designs for quay buildings, control harbor, etc.; built quay around Stockholm Town Hall. **TT 3: SP 0.5: P 2.5: RC 2.5: D 2.5.**—Sept. 1913 to May 1918 Asst. Chf. Engr. and Chf. Engr., at Gota Kanalverk, Toreboda, on maintenance and design, built bridges, quays and hydraulic power work for sawmill and mill. **TT 4.7: P 4.7: RC 4.7: D 1.7.**—May 1918 to Aug. 1922 Gen. Mgr., Gotenburg Handels-Och Sjöfarts Tidning (newspaper), rebuilding establishment and printing offices. **TT 4.2: P 4.2: RC 3: D 1.2.**—Aug. 1922 to June 1926 Cons. Engr., Gotenburg, designing and constructing buildings, roads, streets, etc., in Sweden, Germany, Austria. **TT 3.8: P 3.8: RC 2: D 1.8.**—June 1926 to date Gen. Mgr., Swedish Portland Cement Association, Stockholm, designs, consulting engineering, etc. for use of cement; Editor, *Cement and Concrete*. **TT 4.4: P 4.4: RC 4.4: D 1.**—**TT 24.8: SP 0.7: P 24.1: RC 16.6: D 8.7.** Refers to W. E. Hart, F. R. McMillan, G. E. Warren. (Applies in accordance with Sec. 1, Art. I, of the By-Laws.)

## 5

**(1) BROWN, CHARLES CALVIN**, 89-11 Hayes Ave., Jackson Heights, N. Y. (Age 29. Born Augusta, Ga.) 1916 to 1919 student, Ga. Mil. Coll.—June 1921 to Oct. 1923 Rodman and Instrumentman on highway location and construction, and Head Inspector on construction of concrete and asphalt pavements, and Aug. 1924 to Aug. 1925 Asst. Engr. in charge of location and construction of highways, all for Mecklenburg Highway Comm., Charlotte, N. C. **TT 2.7: SP 0.7: P 2: RC 1.**—Oct. 1923 to Aug. 1924 Transitman, North Carolina State Highway Comm., instrument work on highway location. **TT 0.9: P 0.9.**—Aug. 1925 to Feb. 1926 Civ. Engr. with J. S. Easley, Cons. Engr., Bronson, Fla., in charge of engineering work on laying out and constructing sub-divisions, streets and highways. **TT 0.6: P 0.6: RC 0.6: D 0.6.**—Feb. 1926 to June 1927 Asst. City Engr., Tampa, Fla., being Engr. on paving, sewer, sewage disposal and other construction. **TT 1.2: P 1.2.**—June 1927 to March 1929 Gen. Contr. (C. C. Brown, Contr.), Tampa, Fla., estimating, bidding and constructing, sewer contracts for City of Tampa (\$48 000), sub-contract on State Highway No. 2, Polk County, Fla. (\$23 000), and sewer system for City of Ft. Meade, Fla. (\$35 000). **TT 1.7: P 1.7: RC 1.7.**—March to July 1929 Res. Engr., City of Charlotte, N. C., being Engr. on construction of railroad underpass and coal trestle. **TT 0.4: P 0.4: RC 0.4.**—July 1929 to date Field Engr., New York Steam Corporation, New York City, supervising installation of steam mains and relocation of subsurface structures in New York City. **TT 1.5: P 1.5: RC 1.5.**—**TT 9: SP 0.7: P 8.3: RC 5.2: D 0.6.** Refers to W. J. Baldwin, Jr., R. T. James, D. C. Johnson, C. L. King, L. M. Ross.

## 6

**(11) CALHOUN, CHAD F.**, 1204 Spring Arcade Bldg., Los Angeles, Cal. (Age 33. Born Springfield, Nebr.) Took Civ. Eng. course, Los Angeles Polytechnic High School and Junior Coll. 1921-1922 (nights) student reinforced concrete construction, Univ. of Southern Cal.—May 1917 to May 1919 with U. S. Army, F Co., 117th Engrs., 42d Div., A. E. F., after April 1918 as Sergeant, on road repair, temporary bridges, barrack erection, trench systems, drainage, wire, patrols, surveys, etc. **TT 1: SP 1.**—July to Aug. 1919 Draftsman, U. S. Indian Service, Los Angeles, Cal., mapping topographic survey of area near Parker, Ariz. **TT 0.2: P 0.2.**—Sept. 1919 to Nov. 1923 Deputy County Surveyor with Los Angeles County Surveyor, drafting, surveys and checking subdivision surveys, after 1922 had charge of Subdivision Dept. of Surveyor's Office. **TT 4.2: P 4.2: RC 1.5.**—Dec. 1923 to Feb. 1925 in private practice, Los Angeles, on subdivision, including laying out and construction of street and other improvements, also calculating and drafting for engineers, etc. **TT 1.2: P 1.2: RC 1.2.**—March to May 1925 Gen. Mgr. for "Nurmi" Track Meet, Los Angeles Coliseum for Rainbow Div. Veterans.—Aug. 1925 to March 1926 Engr. Draftsman, Los Angeles County San. Dist., right-of-way descriptions, searching titles and sanitary sewer design. **TT 0.7: P 0.7.**—April 1926 to Dec. 1928 Engr. with Peter R. Gadd, Inc. and MacDonald & Kahn, Inc., in charge of engineering work for construction of storm drains, sanitary sewers, street and highway paving (over \$6 000 000); assisted Gen. Mgr. on estimates for construction (over \$35 000 000), including Denny Hill Regrade and Hanford Street Sewer, Seattle, Wash., Owyhee Dam, Oregon, Phoenix City Hall, Arizona, and San Gabriel Dam and streets and highways in Los Angeles; also Vice-Pres. of Peter R. Gadd, Inc. and (Sept. 1927 to Jan. 1929) Pres., Center Securities Company, a subsidiary. **TT 2.7: P 2.7: RC 1.9.**—Jan. 1929 to May 1930 Chf. Engr., Fisher, Ross, MacDonald & Kahn, Inc., on San Gabriel Dam Project, Los Angeles County; work included quantity surveys and estimates, railroad location, construction of buildings, bridges, pipe lines, hydraulic sluicing system, etc., design of gravel and concrete plant and concrete distributing system. **TT 1.3: P 1.3: RC 1.3.**—May 1930 to date Chf. Engr. and Gen. Mgr., Fisher, Ross, MacDonald & Kahn, Inc. and MacDonald & Kahn, Inc., Los Angeles office, general



engineering construction. *TT 0.5: P 0.5: RC 0.5.—TT 11.8: SP 1: P 10.8: RC 6.4.* Refers to C. R. Compton, A. Donaldson, F. Gillelen, A. Jones, H. M. Jones, A. M. Rawn, J. E. Rockhold, F. Thomas, A. K. Warren.

## 7

(12) **CAMP, CECIL SIDNEY**, 14 Park Terrace, Corvallis, Ore. (Age 23. Born Marche, Ark.) 1929 B. S. in C. E., Univ. of Ark. *TT 4: P 4.*—June to Oct. 1929 Materials Inspector, and March to Sept. 1930 Bridge and Culvert Inspector, Missouri State Highway Comm., inspecting road materials, bridge, culvert, gravel surfacing and concrete slab construction. *TT 0.4: SP 0.4.*—Oct. 1929 to March 1930 Draftsman, Missouri Valley Bridge & Iron Co., Leavenworth, Kans., also detailing, checking, etc. *TT 0.2: SP 0.2.*—Sept. 1930 to date Instructor in Civ. Eng., Oregon State Agricultural Coll., in responsible charge of drawing and surveying classes. *TT 0.3: P 0.3.—TT 4.9: SP 0.6: P 4.3.* Refers to S. M. P. Dolan, J. R. Griffith, G. W. Holcomb, C. S. Jones, W. H. Jones, H. S. Rogers, W. R. Spencer.

## 8

(14) **COX, LAWRENCE WILBUR**, 2150 South Thirty-Fifth Ave., Omaha, Nebr. (Age 44. Born Clyde, Iowa.) Registered Prof. Engr. and Surveyor, State of Iowa. 1910 B. S. C. E., Iowa State Coll. *TT 4: P 4.*—June 1910 to March 1915 Constr. Foreman and office work, Des Moines (Iowa) Bridge & Iron Co., making plans for and building water-works systems, and assisting Purchasing Agt. *TT 4.4: SP 0.4: P 4: RC 3.*—March 1915 to Oct. 1918 and March 1920 to May 1922 in private practice of engineering at Des Moines, investigations, surveys, plans, specifications and inspection of water-works, sewage systems, etc., including water supplies for seven cities, main extensions at Jewell and Prairie City, sewers and sewage-treatment plant at Ankeny, sewers at Redfield, etc. *TT 5.7: P 5.7: RC 4.7: D 1.*—Oct. 1918 to March 1919 County Engr., Iowa County, Marengo, Iowa, inspection and contract settlements on bridge construction, surveys and recommendations for new bridges and some road work. *TT 0.4: P 0.4: RC 0.4.*—March 1919 to March 1920 Designer for C. H. Currie, Cons. Engr., Webster City, Iowa, designing and making plans for sewers and sewage-treatment plants for several towns. *TT 1: P 1: RC 0.5.*—May 1922 to March 1923 Asst. City Engr., Dubuque, Iowa; designed and made plans for new trunk line sanitary sewer and separate storm sewer for city; also on relocation survey for state highway. *TT 0.8: P 0.8: RC 0.5.*—March 1923 to March 1924 City Mgr., Maywood, Ill.; also Supt. in charge of operation of water-works and of inspection of water and sewer extensions, etc. *TT 1: P 1: RC 1.*—March 1924 to March 1925 City Mgr., Kingsford, Mich.; also in charge of plans, specifications and supervision of construction of 18 miles of water mains, street improvements, etc. *TT 1: P 1: RC 0.7: D 0.3.*—Nov. 1925 to March 1929 Bridge Designer, Nebraska Dept. of Public Works, Lincoln, Nebr., stressing up and making plans for bridges, including overhead grade-elimination crossings and short-span arch bridges over Platte River. *TT 2.9: SP 0.4: P 2.5: RC 1.5.*—March 1929 to date (except 3 months Ill) Architectural Designer and Structural and Bridge Draftsman, Union Pacific R. R., Omaha, Nebr., stressing and making plans for buildings, bridges, etc., including structural design for remodeling Cheyenne (Wyo.) passenger depot, checking parts of structural design of New Union Passenger Station, Omaha, etc. *TT 1.3: SP 0.3: P 1: RC 0.5.—TT 22.5: SP 1: P 21.5: RC 12.8: D 1.3.* Refers to F. H. Austin, C. H. Currie, M. I. Evinger, A. Marston, J. G. Mason, C. S. Nichols, A. L. Ogle, N. Welden.

## 9

(11) **DAUCHY, EDWARD HAROLD**, 821 South Vine St., Denver, Colo. (Age 47. Born Troy, N. Y.) June 1902 to July 1904 Rodman and Instrumentman, Chicago, Rock Island & Pacific Ry. *TT 1.1: SP 1.1.*—Aug. 1904 to Sept. 1905 Instrumentman and Bridge Inspector, on construction, Southern Ry. *TT 0.6: P 0.6.*—Sept. 1905 to April 1906 Asst. on Corps, maintenance of way, Chicago, Burlington & Quincy R. R. *TT 0.3: P 0.3.*—April to July 1906 Res. Engr., Kansas City Southern Ry., on construction, in charge at New Iberia, La. *TT 0.2: P 0.2: RC 0.2.*—Aug. 1906 to April 1907 Instrumentman, and April to July 1907 Asst. Engr. on maintenance of way, in charge of division work, C. R. I. & P. Ry. *TT 0.6: SP 0.3: P 0.3: RC 0.3.*—July 1907 to Aug. 1909 Res. Engr., Chicago, Milwaukee & St. Paul Ry., in charge of mountain construction, including tunnel work. *TT 2: P 2: RC 2.*—Sept. 1909 to Oct. 1915 Res. Engr. and Asst. Engr., Northern Pacific Ry., in charge of construction in Western Washington, including tunnel, bridge, track and freight-house. *TT 6.2: P 6.2: RC 6.2.*—Oct. 1915 to Dec. 1928 not on engineering.—Jan. 1929 to April 1930 Asst. Engr., Missouri-Kansas-Texas Lines, on valuation work. *TT 1.3: P 1.3.*—April 1930 to date member of firm, Gould & Herrin, Inc., Contrs.—*TT 12.3: SP 2.3: P 10: RC 8.7.* Refers to R. L. Alexander, J. C. Baxter, W. L. Darling, F. B. Dauchy, W. E. Dauchy, L. S. Oakes.

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(5) **DAVIS, LeROY MILTON**, 3902 Ayrdale Ave., Baltimore, Md. (Age 30. Born Buffalo, N. Y.) 1923 C. E., Cornell Univ. *TT 4: P 4.*—June 1923 to Feb. 1928 with Niagara Falls Power Co., 6 months as Transitman on hydro-electric power-house construction, then Engr. of Hydraulics, on design, computations, model work, stream-flow measurement and turbine tests. *TT 4.7: P 4.7: RC 2.*—March 1928 to Jan. 1930 Designer, Aluminum Co. of America, Pittsburgh, Pa., on power-house and hydro-electric equipment design. *TT 1.9: P 1.9: RC 1: D 1.9.*—Feb. 1930 to date Engr., Pennsylvania Water & Power Co., Baltimore, Md., on model experimental work. *TT 0.8: P 0.8: RC 0.8.*—*TT 11.4: P 11.4: RC 3.8: D 1.9.* Refers to C. M. Allen, L. S. Bernstein, L. L. Davis, W. P. Feeley, N. R. Gibson, J. W. Rickey.

## 11

(1) **DECOMBE, ALBERTO**, Avenida El Bosque 590, Santiago, Chile. (Age 55. Born Valparaiso, Chile.) 1902 Bachiller en Humanidades-Bachiller en Matematicas e Ingeniero Civil, Universidad de Chile.—1902 to 1908 on location and construction of railroads from Alcones to Pichilemu (25 km.), including tunnel (2 200 m.), Temuco to Carahue (30 km.) and 120 km. north from Cabildo, including design and construction of bridges and buildings. *TT 6: P 6: RC 6: D 6.*—1908 to date with Dept. of Public Works. until 1915 as Chf. Designing Engr., being Inspector of and in charge of examination and approval of studies and surveys for railroads under construction (over 200 km.), and since 1915 Director of Reclamation, supervision over design and construction, including Laja, Maule, Manco and Melado Canals (950 km., \$9 000 000), twenty dams and irrigation projects (under construction, to cost \$12 000 000), including rock and earth fill, multiple arch and Ambursen dams to irrigate 1 400 000 acres; also acted as Cons. Engr. on Temco Canal for Gibbs & Co., irrigation of 32 000 acres of Zemita Project and 5 000 acres for Ruis Project, etc., work included design and construction of all structures and canals; also past 24 years Prof. of Rys. and Highways, Catholic Univ. of Santiago, and past three years Prof. in charge of construction works, Sub-Ingenieros de Fomento Fabril (School for Industrial Engrs.) *TT 22: P 22: RC 22: D 12.*—*TT 28: P 28: RC 28: D 18.* Refers to E. B. Budge, A. E. Crane, G. Dunn, F. R. Harris, L. Lira Manso, L. A. Robb, S. W. Stewart, A. Streiff, J. Tonkin Thomas, C. P. Williams.

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(2) **DEVEREUX, GEORGE FRANCIS**, 30 Upland Road, Cambridge, Mass. (Age 42. Born Burlington, Vt.) 1913 B. S. in C. E., Univ. of Vt. *TT 4: P 4.*—June 1913 to July 1914 and Nov. 1915 to Jan. 1917 Draftsman, successively with Canadian Bridge Co., Walkerville, Ont., Canada, and American Bridge Co., Ambridge, Pa., on shop details for steel bridges and buildings. *TT 2.3: P 2.3.*—1917 Draftsman, H. Koppers Co., Pittsburgh, Pa., on drawings of steel framing for coke and by-product plants. *TT 1: P 1.*—Jan. 1918 to Aug. 1919 1st Lieut., 524th Engrs., U. S. Army, in United States and France, about 6 months in command of company. *TT 1.5: P 1.5: RC 1.5.*—Dec. 1919 to Feb. 1921 Structural Designer, until May 1920 with Chemical Constr. Co., Charlotte, N. C., on steel and concrete fertilizer and chemical plants, then with Stone & Webster, Boston, Mass., on steel for steam power plants. *TT 1.1: P 1.1: D 1.1.*—May 1922 to Sept. 1924 Chf. Draftsman and Structural Engr., Davis & Farnum Mfg. Co., Waltham, Mass., on design, fabrication and erection of gas holders, purifiers, tanks, etc., for gas plants. *TT 2.3: P 2.3: RC 2.3.*—Jan. to Sept. 1925 Asst. Engr. with Forstall, Robison & Luqueer, New York City, gathering field data and making estimate of cost of replacing Washington Gas Light Co. *TT 0.7: P 0.7.*—Sept. 1925 to Nov. 1927 Structural Designer with Stone & Webster, on steel for power plants, steel and concrete for addition to plant of Commercial Solvents Co., Peoria, Ill. *TT 2.1: P 2.1: D 2.1.*—Nov. 1927 to Dec. 1929 Chf. Draftsman, Boston & Maine R. R., Boston, in charge of design and drafting of bridges, engine-houses, etc. *TT 2.1: P 2.1: RC 2.1: D 2.1.*—Dec. 1929 to date Structural Checker, New England Power Constr. Co., Boston, on design of dams, power houses, substructures, etc., concrete and steel. *TT 1: P 1: D 1.*—*TT 18.1: P 18.1: RC 5.9: D 6.3.* Refers to F. S. Bailey, R. W. Burpee, B. W. Guppy, R. L. Monroe, F. C. Shepherd.

## 13

(1) **DUNNE, EUGENE ROBERT**, Professional Bldg., Lynbrook, N. Y. (Age 38. Born Brooklyn, N. Y.) Prof. Engr., State of New York.—Three years student, Drexel Inst., Philadelphia, Pa. *TT 1.5: P 1.5.*—June 1914 to Jan. 1916 Transitman, Sage Foundation Homes Co., Forest Hills, N. Y., laying out and monumenting new subdivision. *TT 0.8: SP 0.8.*—Jan. 1916 to May 1917 Chf. of Party, Transit Development Comm., Brooklyn, N. Y., giving lines and grades for construction on 4th Ave. subway extension to Coney Island. *TT 1.3: P 1.3.*—May 1917 to May 1919 with U. S. Army, First Reserve Engr. Corps of New York (11th U. S. Engrs.), finally as Master Engr., constructed railways in France. *TT 2:*

# FOR ADMISSION

**P 2: RC 1.**—July 1919 to Dec. 1920 Supt. of Constr., Hyland-Jencks, New York City, building sewers, roads and culverts on Charles M. Schwab estate at Loretto, Pa. **TT 1.4: P 1.4: RC 1.4.**—Jan. 1921 to Sept. 1922 Constr. Engr. with A. C. Shand, Jr., Gen. Contr., Philadelphia, Pa., on construction of bridges, highways and sewers. **TT 1.6: P 1.6: RC 1.6.**—Nov. 1922 to March 1926 Chf. Engr., Seawane Corporation, Hewlett, N. Y., sub-divided 450 acre parcel, constructed bulkheads, bridges and storm sewers, placed hydraulic fill. **TT 3.3: P 3.3: RC 3.3: D 3.3.**—March 1926 to date Pres., Carman-Dunne, Inc., Mun. Engrs., Lynbrook, N. Y., Village Engrs. for Lynbrook, Malverne, Hewlett Harbor and Stewart Manor, in full charge of design and supervision of all street paving, stormwater drainage and sanitary sewers. **TT 4.7: P 4.7: RC 4.7: D 4.7.**—**TT 16.6: SP 0.8: P 15.8: RC 12: D 8.** Refers to C. R. Bettes, T. J. Carlile, A. B. Cohen, J. H. Fuentes, W. B. Parsons, C. Potts.

14

**(1) FISHER, RALPH LASHER**, 624 Bloomfield Ave., Nutley, N. J. (Age 25. Born Catskill, N. Y.) 1929 C. E., Rens. Pol. Inst. **TT 4: P 4.**—Aug. 1929 to Aug. 1930 Draftsman, Atlantic Gulf & Pacific Co., Manila, Philippine Islands. **TT 0.5: SP 0.5.**—**TT 4.5: SP 0.5: P 4.** Refers to O. A. Boni, E. R. Cary, S. Garnezy, T. R. Lawson.

15

**(1) FORNEROD, MARCEL FRANCIS**, 230 East Fifty-First St., New York City. (Age 27. Born Winterthur, Switzerland.) 1926 C. E., Federal Pol. Inst., Zurich, Switzerland. **TT 4: P 4.**—June 1927 to Jan. 1929 with Elektrobank A. G., Zurich, as Surveyor, Instrumentman, Supervisor on earth moving contracts, and Supt. on concrete work for Islas del Guadalquivir, S. A., Seville, Spain. **TT 1.1: SP 0.5: P 1.6: RC 0.6.**—June–Sept. 1929 Draftsman, White Constr. Co., New York City, some reinforced concrete design. **TT 0.2: SP 0.2.**—Oct. 1929 to date with Elec. Bond & Share Co., New York City, as Designer of reinforced concrete hydraulic structures and arch dams. **TT 1.2: P 1.2.**—**TT 6.5: SP 0.7: P 5.8: RC 0.6.** Refers to C. L. Bogert, W. E. Brown, P. L. Hornby, A. Muhlheim, J. F. Sanborn.

16

**(6) FORSBERG, RUDOLF PERCY, P. & L. E.** Terminal Bldg., Pittsburgh, Pa. (Age 60. Born Lynchburg, Va.) Registered Prof. Engr., Commonwealth of Pennsylvania. June 1887 to April 1888 Rodman, Lynchburg & Durham R. R. (Norfolk & Western Ry.). **TT 0.4: P 0.4.**—Oct. 1888 to April 1891 with Richmond & Danville R. R. (Southern Ry.), until April 1890 as Rodman, Chairman and Leveler on surveys, then Res. Engr. in responsible charge of seven miles of construction on Yadkin Branch. **TT 1.2: SP 1.2.**—May 1891 to Feb. 1892 Locating Engr., Lynchburg (Va.) Elec. Ry., on resurvey and relocation of road. **TT 0.5: SP 0.3: P 0.2: RC 0.2.**—Feb. to April 1892 Draftsman with Chas. Reade, Jr., Archt., Richmond, Va. **TT 0.1: SP 0.1.**—April to Sept. 1892 Draftsman, Norfolk & Western Ry., plotting notes, cross-sections, etc. of branch line surveys and estimating cost of construction, designing frame station buildings, tracing track layouts in terminal yards, designing cattle-loading pens. **TT 0.2: SP 0.2.**—Sept. 1892 to date with Pittsburgh & Lake Erie R. R., until March 1899 as Draftsman, plotting record maps and surveys, making estimates, etc., in responsible charge of design and specifications for two brick and stone passenger stations, making plans for extension of masonry structures in connection with double tracking and four tracking parts of road; March 1899 to Sept. 1902 Chf. Draftsman, in charge of drafting room, Office of Chf. Engr., in responsible charge of designs and specifications for stone skew-arch bridge at Fayette City, Pa., masonry plans for concrete structures with spans (6 ft. to 50 ft.) on Brownsville Branch (8 7/10 miles); Sept. 1902 to March 1920 Asst. Engr. in responsible charge of design of construction and maintenance of work, including three reinforced concrete arches (each 43 ft.) over C. & P. R. R., Beaver, passenger station and steel and concrete viaduct at Connellsville, Pa., reinforced concrete arches (spans 70 to 85½ ft.) on Lake Erie & Eastern R. R., Youngstown, Ohio, concrete substructures for four river crossings (500 to 1950 ft. long) and for Ellwood City Branch Crossing of Beaver River (1200 ft. long) Woodlawn (1½ miles long) and East Youngstown (2½ miles long) Yards, Woodlawn passenger station (brick and brown stone, tile roof and floor) concrete substructures for bridge over Mahoning River at Lowellville Junction and over back channel of Ohio River, Neville Island, Pittsburgh, also Terminal Annex Bldg., Pittsburgh (6 stories, brick on concrete pile foundation), etc.; also investigated and made reports on large earth slides for Boroughs of Bellevue and West View, Pa.; since March 1920 Prin. Asst. Engr., and assumed duties of Asst. Vice-Pres. and Chf. Engr. in his absence. **TT 35.4: SP 2.7: P 32.7: RC 32.7: D 22.**—**TT 37.8: SP 4.9: P 32.9: RC 32.9: D 22.** Refers to V. R. Covell, G. S. Davison, M. Knowles, E. K. Morse, A. R. Raymer, C. M. Reppert, L. J. Riegler, E. F. Wendt.

17

**(1) FRASER, ANDREW, Jr.**, 420 West One Hundred Nineteenth St., New York City. (Age 32. Born Inverness, Scotland.) 1924 B. S. in Mech., Elec. and Civ. Eng., St. Andrews Univ., Univ.

Coll., Scotland. *TT 4: P 4.*—1920 to 1924 (4 sessions) Asst. Lecturer in Dundee Tech. Coll. (Evenings).—Oct. 1913 to Oct. 1916 Apprentice, Malcolm Ogilvie & Co., Ltd., Jute Spinners & Mfrs., Dundee, Scotland, turning, machining, general fitting and repairs of jute machinery, engines, boilers. *TT 1.1: SP 1.1.*—Oct. 1916 to April 1917 Engr., Wm. Beardmore & Co., Ltd., Parkhead Forge, Glasgow, Scotland, gun, tool and gauge-room work, jig setting and design. *TT 0.3: SP 0.3.*—April 1917 to Feb. 1919 Leading Mechanic Armourer, Royal Naval Air Service, aero engines and small arms. *TT 0.9: P 0.9.*—March to Sept. 1919 Engr. with Robertson & Orchar, Ltd., Engrs., Wallace Foundry, Dundee, general fitting, construction of jute dressing machines and looms. *TT 0.4: SP 0.1: P 0.3.*—Summers 1920 and 1921 Engr. (Journeyman), Jute Industries, Ltd., J. & A. D. Grimond, Dundee, fitting and repairs of jute machinery, shop and milling machine work, etc.—March to Nov. 1925 supervising erection of jute mill, Soc. Anonima Jutficio Vercellese Vercelli, Italy, mechanical and electrical work and plant organization, upkeep of machines, calculations, etc. *TT 0.8: P 0.8: RC 0.8.*—March 1926 to March 1928 Asst. Gen. Oils Supervisor, Shell Mex Ltd., Glasgow, commercial engineering, on lubrication of engineering plants, such as steam, electrical, marine, coal-mines, paper mills, etc. *TT 2: P 2: RC 2.*—April 1928 to July 1929 Asst. Inspector and Tester with Harland & Wolff, Ltd., Diesel Engine Works, Finnieston, Glasgow, on mass production and machine shop work, reading of assembled drawings, responsible for calculations in final tests of compressed air and airless-injection Diesel engines, research for fuel valves, etc. *TT 1.2: P 1.2: RC 1.2.*—Aug. 1929 to Oct. 1930 with Eastman Kodak Co., Rochester, N. Y., Eng. and Maintenance Dept., estimating, designing and drawing for ferro-concrete and steel structures with general layout of mechanical and electrical equipment. *TT 1.3: P 1.3: D 1.3.*—*TT 12: SP 2.4: P 9.6: RC 4: D 1.3.* Refers to L. F. Fairchild, F. F. Gordon, H. G. Moulton, L. K. Sillico, G. P. A. Stape.

## 18

(3) GARRECHT, KENNETH ESMOND, 1006 East Adams St., Syracuse, N. Y. (Age 22. Born Easton, Pa.) 1930 B. S. in C. E., N. Y. Univ. *TT 4: P 4.*—May 1930 to date Jun. Asst. Civ. Engr., Grade 1, Field, New York State Dept. of Public Works, Div. of Highways. *TT 0.3: SP 0.3.*—*TT 4.3: SP 0.3: P 4.* Refers to H. E. Breed, A. Haring, C. T. Schwarze, D. S. Trowbridge.

## 19

(14) GLASSBERG, MYRON, 7041 Lindell Blvd., St. Louis, Mo. (Age 24. Born St. Louis, Mo.) 1927 B. S., Washington Univ. *TT 4: P 4.*—Summer 1925 Rodman, summer 1926 Estimator, June 1927 to Jan. 1928 Timekeeper, and Jan. 1928 to Oct. 1929 Constr. Engr., Boaz-Kell Constr. Co. *TT 2: SP 0.3: P 1.7: RC 0.8.*—Oct. 1929 to date Agt. for construction specialties, handling construction of National Gunite Contr. Co., Wickwire Spencer Steel Co., Carter Bloxonend Flooring Co., etc. in St. Louis area. *TT 1.2: P 1.2: RC 1.2.*—*TT 7.2: SP 0.3: P 6.9: RC 2.* Refers to J. M. Crom, A. P. Greensfelder, H. Shifrin, E. O. Sweetser, J. G. Tripp.

## 20

(4) GREEY, EDWARD ALEXANDER, Ridgeview Road, Princeton, N. J. (Age 29. Born Yonkers, N. Y.) Licensed Land Surveyor, State of New Jersey. 1924 C. E., Princeton Univ. *TT 4: P 4.*—Sept. 1924 to June 1925 Draftsman and Inspector, Princeton Univ. Power Co., on construction of boiler house, drafting for installation of mechanical equipment, some laying out in field for moving equipment into building. *TT 0.4: SP 0.4.*—June to Dec. 1925 Field Supt., Matthews Constr. Co., Inc., Princeton, supervising construction of concrete retaining walls (brick-faced) and reconstruction of 1800 ft. of treated macadam. *TT 0.5: P 0.5.*—Dec. 1925 to Feb. 1928 with Edgerstowne, Inc. (land development) in charge of subdividing land into 50-acre plots, and other surveys such as studies for sewers, roads, etc.; made drawings for and supervised laying of  $1\frac{1}{4}$  miles of sewer, also on construction of roads, etc. *TT 2.1: P 2.1.*—Feb. 1928 to date with Matthews Constr. Co., Inc., until May 1929 as Field Engr. in charge of construction of  $1\frac{1}{4}$  miles of private road, staking out, supervising construction, measuring quantities, etc., for sub-contracts; since May 1929 Engr. and Quantity Surveyor on new construction, Eng. Dept., Princeton office. *TT 2.9: P 2.9: RC 1.3.*—*TT 9.9: SP 0.4: P 9.5: RC 1.3.* Refers to G. E. Beggs, F. H. Constant, F. A. Heacock, E. A. MacMillan, E. M. Plump, F. N. Willson.

## 21

(5) HARMELING, KARL CLYCE, 2100 Massachusetts Ave., Washington, D. C. (Age 27. Born Bristol, Va.) 1926 B. S., Va. Mil. Inst. *TT 4: P 4.*—Sept. 1926 to June 1928 Instructor in Mathematics, Algebra and Geometry, Virginia Episcopal School, Lynchburg, Va.—July 1928 to date Jun. Engr., U. S. Govt., on design and construction of Mt. Vernon memorial highway. *TT 1.3: SP 1.3.*—*TT 5.3: SP 1.3: P 4.* Refers to J. A. Anderson, E. W. James, W. I. Lee.



## 22

(3) HARVEY, ALFRED LAIRD, 249 Racine St., Chicoutimi, Que., Canada. (Age 33. Born Highgate, England.) 1921 A. B., Cambridge Univ. *TT 2: P 2.*—Sept. 1921 to April 1925 with A. D. Swan, Cons. Engr., Montreal, Que., Asst. Engr. at Vancouver, B. C., on design and supervision of construction of Ballantyne pier (about \$6 000 000), foundations for grain elevator (1750 000 bu.), dry-dock basin and reinforced concrete pier, closing of large cofferdam for Esquimaux dry-dock, and on design, setting out and supervision of construction of steel railway and road bridge across 2d Narrows, Vancouver Harbor (about \$2 000 000). *TT 3.6: P 3.6: RC 1.6.*—April 1925 to Sept. 1926 Engr. with A. D. Swan, and W. I. Bishop, Ltd., Engrs. and Contrs., on design and construction of commercial dry-dock (575 ft. long), steel freight-shed and wharf, and concrete dam for hydro-electric development. *TT 1.3: P 1.3: RC 1.3.*—Feb. 1927 to June 1929 Senior Asst. Engr. with Rendel, Palmer & Tritton, Cons. Engrs., on drawings and specifications for new works, Port of London Authority, and for an electric power station near Bombay, and preliminary survey and preparation of contract for new harbor at Haifa. *TT 2.3: P 2.3: RC 2.3.*—June 1929 to date Res. Engr. with A. D. Swan on construction of new harbor at Chicoutimi (approx. \$2 500 000). *TT 1.6: P 1.6: RC 1.6.*—*TT 10.8: RC 6.8.* Refers to W. I. Bishop, C. P. Dunn, C. A. Leighton, R. Palmer, R. M. Wynne-Edwards.

## 23

(1) HEYDT, FREDERICK GEORGE, 4440 Waldo Ave., New York City. (Age 28. Born New York City.) 1924 B. S., Cooper Union Day School of Tech. *TT 4: P 4.*—Sept. 1924 to date Engr. and Supt., M. F. C. Shoring & Foundation Co., Inc., New York City, supervising construction and sometimes design of foundations, shoring and underpinning of buildings, including Commissary Bldg., New York Central R. R., foundations at Broadway and Walker St., steel protective structure at 1 Wall St., etc. *TT 6.2: P 6.2: RC 4.2.*—*TT 10.2: P 10.2: RC 4.2.* Refers to F. D. Foss, H. W. Lesh.

## 24

(15) LANDON, RANSOM DURELL, 3609 Granada St., Dallas, Tex. (Age 27. Born Geneseo, N. Y.) 1927 C. E. and M. Sc., Univ. of Cinn. *TT 4: P 4.*—Aug. 1921 to June 1927 (co-operative work while student) Laborer, Gradison Const. Co. (5 months), Laborer and Transitman, Union Gas & Elec. Co. (4 months), Transitman, Marlemont Co. (4 months), Eng. Computer and Draftsman, Cleveland, Cincinnati, Chicago & St. Louis Ry. Co. (10 months), Detailer on steel-plate work, Stacey Bros. Gas Constr. Co. (5 months), all in Cincinnati, Ohio, and Chf. of Party, Eng. Dept., City of Cincinnati (5 months).—July 1927 to date Coordinator, Southern Methodist Univ., Dallas, Tex., supervising placement of co-operative students on engineering jobs; since Sept. 1928 also Asst. Prof., Applied Mechanics and Hydraulic Machinery, etc. *TT 3.5: P 3.5.*—*TT 7.5: P 7.5.* Refers to F. F. Bell, J. H. Brillhart, J. H. Knox, H. B. Luther, W. H. Meler, E. L. Myers, E. N. Noyes.

## 25

(9) LEAP, CLIFFORD RAYMOND, 345 Sherwood Ave., Jeffersonville, Ind. (Age 25. Born Jeffersonville, Ind.) 1930 B. S. in Civ. Eng., Univ. of Louisville. *TT 4: P 4.*—Sept. 1924 to Aug. 1925 student in Elec. Eng., Evansville (Ind.) Coll.—Sept. 1925 to Aug. 1926 Lay-outman on structural steel, Logan Co., Louisville, Ky., on layout or marking of raw material for punching. *TT 0.5: SP 0.5.*—July to Sept. 1930 Health Inspector with J. W. Iddings, Health Officer, Lake County, Crown Point, Ind. *TT 0.1: SP 0.1.*—*TT 4.6: SP 0.6: P 4.* Refers to W. R. McIntosh, W. B. Wendt.

## 26

(12) LITT, MORRIS ROBERT, 481 East Eleventh St. North, Portland, Ore. (Age 32. Born Odessa, U. S. S. R.) 1926 B. S. in C. E., Ore. State Coll. *TT 4: P 4.*—Aug. 1918 to Oct. 1921 student, until Jan. 1919 in Physical-Mathematical course, Univ. of Odessa, then in Civ. Eng. course, Odessa Pol. Inst.—Jan. to June 1920 Levelman and Draftsman, and July to Oct. 1920 Dispatcher and Traffic Mgr., Southwestern R. R. of Russia. *TT 0.4: SP 0.4.*—Summer 1925 Gravel Inspector at Central Mixing Plant, Longview (Wash.) Co.—June to Oct. 1926 Draftsman, Checker and Estimator for William D. Smith, Cons. Engr., Portland, Ore. *TT 0.2: SP 0.2.*—Nov. 1926 to Feb. 1927 detailed physical survey, and Nov. 1927 to Feb. 1928 Field Designer, Draftsman and on construction work, Hawley Pulp & Paper Co., Oregon City, Ore., for V. D. Simons, Industrial Engr., Chicago, Ill. *TT 0.5: SP 0.2: P 0.3: RC 0.1: D 0.1.*—March to April 1927 Structural Draftsman and Detailer, for L. L. Dougan, Archt., Portland, Ore. *TT 0.1: SP 0.1.*—May to June 1927 with Gustav Lindenthal, Portland Office, and July to Aug. 1927 with Wallace Bridge & Structural Steel Co., Seattle, Wash., detailing structural steel and tracing, Broadway Bridge Improvement and Lovejoy Viaduct. *TT 0.2: SP 0.2.*—Sept. to Oct. 1927 Bridge Draftsman, Oregon-Washington R. R. & Navigation Co., Union Pacific. *TT 0.1: SP 0.1.*—March to July 1928 on designs, drafting and detailing structural steel in various offices in Portland, Ore., and vicinity.

*TT 0.4: P 0.4: D 0.2.*—Aug. to Sept. 1928 Asst. Eng. Draftsman, Bureau of Public Roads, Portland, Ore. *TT 0.1: P 0.1.*—Oct. 1928 to Oct. 1930 Designer and Draftsman, Management Eng. and Development Co., Dayton, Ohio, on layout of paper and pulp mills to finished design, writing specifications, design, Squad Boss, etc. *TT 2: P 2: RC 1.2: D 0.8.*—Nov. to Dec. 1930 with Rainier Pulp & Paper Co., Shelton, Wash., layout of changes. *TT 0.2: P 0.2: RC 0.1: D 0.1.*—*TT 8.1: SP 1.1: P 7: RC 1.4: D 1.2.* Refers to L. E. Brigham, G. W. Holcomb, L. A. Perry, H. S. Rogers, O. E. Stanley, A. Stein.

27

(3) **LUBY, DENIS JOSEPH**, 523 Tennyson Ave., Syracuse, N. Y. (Age 27. Born Dublin, Ireland.) 1930 B. A. in Eng., Trinity Coll., Dublin Univ. *TT 4: P 4.*—Past 4 months Rodman, Solvay Process Co., Syracuse, N. Y. *TT 0.3: P 0.3.*—*TT 4.3: P 4.3.* Refers to D. Clark, H. N. Cole, W. S. Diver, W. B. Scott, F. W. Stephens.

28

(1) **McGUINNESS, WILLIAM JAMES**, 31 Victor Place, Elmhurst, N. Y. (Age 28. Born New York City.) 1924 M. E., Stevens Inst. Tech. *TT 4: P 4.*—Sept. to Nov. 1924 Asst. in research, Combustion Utilities Corporation, Long Island City, N. Y. *TT 0.1: SP 0.1.*—Nov. 1924 to Feb. 1925 Topographical Computer, Topographical Bureau, Queensborough. *TT 0.1: SP 0.1.*—Feb. 1925 to Nov. 1929 with Turner Constr. Co., timekeeping, job accounting and in Cost Dept. figuring costs, making reports, etc. on jobs, largely industrial buildings (\$200 000 to \$1 000 000) (2½ years), Asst. Supt. (1 year), surveying (1 year), inspecting mechanical equipment (5 months) and expediting (1 month); was responsible for line and grade on 3 reinforced concrete buildings and on three foundations; had charge of two parties on Holland Plaza Bldg., New York City; also inspected piles, sketched location and relocated (under orders from Designer), supervised bending and placing of reinforcing steel, co-ordinated mechanical and masonry work, etc. *TT 4.7: P 4.7: RC 2.1.*—Feb. to April 1930 with Cost Dept., Fred F. French Co., figuring quantities, purchasing supplies, etc. *TT 0.2: P 0.2.*—April 1930 to date with Cost Dept., Marc Eldlitz & Son, Inc., figuring quantity, cost, production, etc., making reports, etc. on New York Hospital. *TT 0.7: P 0.7.*—*TT 9.8: SP 0.2: P 9.6: RC 2.1.* Refers to R. W. Boyd, H. G. Hauck, E. J. Moore, H. C. Paddock, A. P. Richmond, Jr.

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(5) **MARTIN, ROBERT OLOF**, 1330 Quincy St. N. W., Washington, D. C. (Age 24. Born Philadelphia, Pa.) 1930 B. S. in Civ. Eng., Towne Sci. School, Univ. of Pa. *TT 4: P 4.*—Oct. 1926 to Feb. 1928 Senior Draftsman, Bell Telephone Co. of Pennsylvania, Philadelphia, Pa., and in Dist. Engr.'s Office, Upper Darby, Pa., drafting, surveying, records and routine of underground conduit. *TT 0.7: SP 0.7.*—July 1930 to date Jun. Engr., Water Resources Branch, U. S. Geological Survey, Interior Dept., Washington, D. C., office and field work on stream gauging and hydraulics, computations, surveying and construction. *TT 0.5: P 0.5.*—*TT 5.2: SP 0.7: P 4.5.* Refers to W. H. Barton, Jr., H. C. Berry, W. H. Chorlton, N. C. Grover, H. F. Hill, Jr., A. H. Horton, J. C. Hoyt, E. L. Ingram.

30

(1) **MEISSNER, WILLIAM ALFRED**, 431 Mercer Ave., Roselle, N. J. (Age 29. Born Bronx, N. Y.) 1924 A. B. in Eng., Columbia Coll. *TT 4: P 4.*—June 1923 to Feb. 1924 post-graduate student in Eng., Columbia Univ.—Feb. to Aug. 1924 Draftsman, Lawyers Title & Trust Co., New York City, drafting and plotting field surveys, making maps, drawings and detailing civil engineering work. *TT 0.3: SP 0.3.*—Aug. to Oct. 1924 Asst. to Supt., New York Pyrites Co., Gouverneur, N. Y., in charge of development of stone mill and quarry. *TT 0.2: P 0.2: RC 0.2.*—Oct. 1924 to June 1926 Laboratory Asst., Premier Mill Corporation, Geneva, N. Y., testing materials and developing processes to adapt mill to industrial uses. *TT 0.9: SP 0.9.*—June 1926 to date with Lehigh Valley R. R., as Transitman and Engr., in charge of field party on surveys, laying track, designing layouts for industrial plants, developing plans, drawing and designing platforms, building, trestles and small bridges, past 6 months being Res. Engr. on rebuilding of six bridges in Jersey City and Bayonne. *TT 3.5: SP 1: P 2.5: RC 2.5: D 2.5.*—*TT 8.9: SP 2.2: P 6.7: RC 2.7: D 2.5.* Refers to J. K. Finch, H. T. Rights, F. E. Schall, F. C. Stehle, H. A. Whitcomb.

31

(13) **MOORE, RAY NATHANIEL**, 500 Oak St., San Francisco, Cal. (Age 33. Born Strawberry Point, Iowa.) 1918 B. S. in C. E., Iowa State Coll. *TT 4: P 4.*—April 1919 to Sept. 1920 Structural Steel Detailer, Texas Carnegie Steel Association, making detail drawings for structural steel fabricating shop. *TT 1.4: P 1.4.*—Jan. 1921 to Aug. 1924 Asst. Office Engr., Houston Structural Steel Co., checking shop detail drawings, making designs for sales promotion, correcting and adjusting field and office errors in fabrication. *TT 3.7: P 3.7: RC 2.*—Sept. 1924 to Nov. 1925 with Ralph Barker and E. O. Burgess, and Jan. 1928 to Feb. 1929 with Wegmann & Johnson, San Francisco, Cal., as Structural Steel Detailer and

Checker, making and checking detail drawings for structural steel fabricating shops. *TT 2.3: P 2.3: RC 1.1.*—Dec. 1925 to Sept. 1926 and Feb. 1929 to Sept. 1930 Designer, making design drawings for industrial and office buildings, plant layout, etc. and on office building design, successively with H. J. Brunnier, L. S. Rosener and Earl Cope, all of San Francisco. *TT 2.4: P 2.4: RC 1.5.*—Sept. 1926 to Sept. 1927 Office Engr., in charge of Eng. Dept., Pacific Rolling Mill Co., fabricators of structural steel. *TT 1: P 1: RC 1: D 1.*—Sept. to Dec. 1930 Structural Engr. in charge, Pacific Foundry Co., San Francisco, on design and detail of copper smelter for Russian Govt. *TT 0.3: P 0.3: RC 0.3: D 0.3.*—At present Constr. Supt. with J. H. McFarland, Contr., in charge of several small jobs. *TT 0.1: P 0.1: RC 0.1.*—*TT 15.2: P 15.2: RC 6: D 1.3.* Refers to R. O. Boldt, H. J. Brunnier, R. A. Hanson, S. I. E. Hjort, R. F. Lyman, H. S. Murray, L. S. Rosener.

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(1) NOYES, HAYDON THOM, 1 Odell Pl., New Rochelle, N. Y. (Age 27. Born Washington, D. C.) 1925 B. S., and 1926 C. E., Coll. of City of N. Y. *TT 4: P 4.*—Feb. 1926 to date with Turner Constr. Co., New York City, as Designer, Checker and Detailer of structural features of buildings; directing structural plans, preparing estimates and quantity surveys of buildings, general field work, lines and grades, Expeditor of manufacture of construction materials; since Oct. 1930 (loaned to Chanin Constr. Co.) Designer of floor construction of apartment building (29 stories) also Checker of floor plans. *TT 4.4: SP 0.5: P 3.9: RC 1.5.*—*TT 8.4: SP 0.5: P 7.9: RC 1.5.* Refers to H. C. Dinney, R. E. Goodwin, F. O. X. McLoughlin, H. C. Paddock, A. A. Pregler, A. C. Stiefel.

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(1) PERKINS, RUPERT GERARD, 200 Fifth Ave., New York City. (Age 37. Born Berlin, N. H.) 1917 C. E., Thayer School Civ. Eng. *TT 4: P 4.*—Summer 1917, and 1919 to 1921 Field Asst. with H. F. Ferguson, Cons. Engr., acting as Rodman, Timekeeper, Material checker, Instrumentman, Estimator, etc. *TT 1.1: SP 1.1.*—1917 to 1919 Private and 2d Lieut., U. S. Army, 29th Engrs., 1st Corps, 2d Army, A. E. F., sound ranging and surveying. *TT 0.2: SP 0.2.*—1921 to 1922 Asst. Engr., James MacLaren Co., Ltd., surveying, drafting and designing, in charge of surveys, and designed and supervised erection of small structures. *TT 0.8: SP 0.3: P 0.5: D 0.5.*—Aug. 1922 to date Field Engr. with H. S. Ferguson and (after 1928) H. S. Ferguson & Co., Engrs., supervising engineering on hydro-electric development, layout and inspection, dam construction, etc., having charge of surveys for plant development and for proposed work, etc., drafting, estimating, interpreting plans for paper-mill construction, etc. *TT 6.1: SP 1.7: P 4.4: RC 4.4.*—*TT 12.2: SP 3.3: P 3.9: RC 4.4: D 0.5.* Refers to H. S. Ferguson, J. H. McCarthy, K. W. Ross, G. Slover, J. W. Tower, B. T. Weston, C. M. Weston.

34

(9) PHILPOTT, JAMES HENRY, 86 Walnut St., Wabash, Ind. (Age 27. Born Warsaw, Ind.) Registered Prof. Engr., State of Indiana.—1926 B. S., Purdue Univ. *TT 4: P 4.*—June-Aug. 1926 Asst. Engr., Illinois Div. of Highways, Dept. of Public Works and Bldgs., Carbondale, Ill., designing culverts, laying grade, etc. *TT 0.1: SP 0.1.*—Jan. 1927 to Feb. 1929 with Florida State Road Dept., as Instrumentman and Inspector, being Chf. of Party on grading, staked out work, laid grade, etc.; Inspector on reinforced concrete bridge, Plant and Mixer Inspector on concrete paving, under supervision of Div. Engr. *TT 1.1: SP 1.1.*—Jan. 1930 to date City Engr., Wabash, Ind. *TT 0.9: P 0.9: RC 0.9.*—*TT 6.1: SP 1.2: P 4.9: RC 0.9.* Refers to W. K. Hatt, R. B. Willey.

35

(1) RHODES, GEORGE IRVING, 39 Broadway, New York City. (Age 47. Born Andover, Mass.) 1905 B. S. in E. E., Mass. Inst. Tech. *TT 4: P 4.*—Summers 1903 and 1904 Eng. Asst., Board of Public Works, Andover, Mass., acting as Rodman, etc.—Summer 1905 Laborer, Rockingham Light & Power Co., Portsmouth, N. H.—1905 to 1906 Laboratory Asst., Elec. Eng. Dept., Massachusetts Inst. of Technology. *TT 0.6: P 0.6.*—1906 to 1912 Asst. Engr., and later Elec. Engr., Motive Power Dept., Interboro Rapid Transit Co., in charge of electrical engineering design and responsible for maintenance of electrical control switch-boards and for construction and maintenance of underground cable system. *TT 6: P 6: RC 3: D 3.*—1912 to 1917 Cons. Engr., White, Weld & Co., Bankers, Boston, Mass., responsible for design and construction of all extensions to properties of Fall River Elec. Light Co., and Newburyport Gas & Elec. Co., including power houses, distribution systems, etc. *TT 5: P 5: RC 5: D 2.*—1917 to date with Ford, Bacon & Davis, Inc., New York City, first as Mgr., Eng. Dept., then Vice-Pres. and Cons. Engr., and later Director, being generally responsible for design and construction; work included general design of hydro-electric development of Ouachita River in Arkansas and complete design and construction of Rammel Dam (900 ft. long, 60 ft. high) with power plant (9 000 kw.) and transmission line to Pine Bluff, Ark., for Arkansas Power & Light Co., design and construc-

tion of gas-fired steam-power station (100 000 kw.) near Monroe, La., with 119 000-volt transmission lines to Mississippi and Arkansas, including 3 200-ft. overhead span across Mississippi River at Vicksburg, three gas-engine driven compressor stations on natural gas pipe line, Monroe to New Orleans (18 900 h. p.) and pipe-line compressing stations, etc., of natural gas system, Monroe and Richland, La., to Birmingham, Atlanta and other cities; construction of natural gas pipe-line, Monroe, La., to St. Louis, Mo., and design of concrete pile viaduct over Lake Ponchartrain near New Orleans. *TT 13.5: P 13.5: RC 13.5: D 6.—TT 29.1: P 29.1: RC 21.5: D 11.* Refers to D. C. Jackson, W. V. McMenimen, G. A. Orrok, F. W. Scheidenhelm, W. E. Swift, H. M. Turner, W. von Phul.

## 36

(1) **RICHMOND, ROBERT WILSON**, Technology Club, New York City. (Age 27. Born Chestnut Hill, Mass.) 1927 B. S., Mass. Inst. Tech. *TT 4: P 4.—*Feb. to Nov. 1927 Production Worker, oil-field production, until June with Gulf Pipe Line Co., Midland, Tex., then with Sinclair Oil & Gas Co., Seminole, Okla. *TT 0.4: SP 0.4.—*Nov. 1927 to May 1928 Production Foreman and Asst. Geologist, Mid Kansas Oil & Gas Co., Rankin, Tex., on production and later sub-surface geological and scouting in Yates oil field, near Rankin. *TT 0.2: SP 0.2.—*May 1928 to March 1929 Constr. Supt., McCrory Stores Corporation, New York, supervising alteration of old buildings into stores, in responsible charge of installing fixtures and equipment. *TT 0.9: P 0.9: RC 0.9.—*May 1929 to date Asst. Engr., with H. de B. Parsons on field and office work for building and subway construction. *TT 1.8: P 1.8: D 0.6.—TT 7.3: SP 0.6: P 6.7: RC 0.9: D 0.6.* Refers to H. de B. Parsons, J. H. Richardson, J. F. Sanborn.

## 37

(1) **SHAPIRO, WILLIAM**, 2055 Ocean Ave., Brooklyn, N. Y. (Age 26. Born New York City.) 1925 B. S. in C. E., Cooper Union. *TT 4: P 4.—*May to Dec. 1925 Jun. Asst. Civ. Engr., Bureau of Highways, New York State, being Instrumentman on surveys and Inspector on construction. *TT 0.2: SP 0.2.—*Jan. 1926 to Dec. 1929 Jun. Engr., Board of Transportation, New York City, being Chf. of Party on preliminary survey and Line Engr. on construction. *TT 3.1: SP 0.9: P 2.2.—*Dec. 1929 to date Field Engr., Hart & Early Co., Inc., on line and grade for subway construction. *TT 1: P 1: RC 1.—TT 8.3: SP 1.1: P 7.2: RC 1.* Refers to J. J. Durfee, R. W. Greenlaw, R. S. Saunders.

## 38

(9) **SHELT, MILLARD FILMORE**, Box 70, Middletown, Ohio. (Age 51. Born Cincinnati, Ohio.) 1910 to date Pres. and Gen. Mgr., Ohio Corrugated Culvert Co., also since Jan. 1928 Pres. and Gen. Mgr., Virginia Culvert Corporation, and since Jan. 1930 Pres., Highway Products & Mfg. Co., Elmira, N. Y., manufacturing and distributing culverts, subdrains and sewer pipe; past 20 years has worked with highway, municipal and private engineers on solution of drainage problems; has had responsible charge of engineers designing and installing storm and subdrainage sewer systems, also jacking pipe through fills, threading pipe through failed structures and design and construction of special installations. *TT 20: P 20: RC 20.* Refers to M. J. Adams, H. E. Cotton, T. Ellett, J. B. Morrison, H. W. Rinearson, H. E. Snyder.

## 39

(1) **SHEPHERD, EDWARD MILRAY**, Care, Queensland Irrigation Comm., College Rd., Brisbane, Australia. (Age 24. Born Townsville, Queensland, Australia.) 1928 B. E., Univ. of Queensland, Brisbane. *TT 4: P 4.—*Jan. 1928 to date Jun. Asst. Engr., Design Branch, Queensland Irrigation & Water Supply Comm., in charge of preliminary investigations, surveys and testing for proposed high concrete dam site (Field Engr.), Irrigation Branch and drawing office on design and checking of structures for waterworks, etc., and on investigations, etc. for water supply and irrigation. *TT 2.8: P 2.8.—TT 6.8: P 6.8.* Refers to W. H. R. Nimmo, R. A. Sutherland. (Applies in accordance with Sec. 1, Art. I, of the By-Laws.)

## 40

(1) **SOLOMON, MORTON**, 253 Old Mamaroneck Road, White Plains, N. Y. (Age 27. Born New York City.) 1925 B. S., and 1926 C. E., Coll. of City of N. Y. *TT 4: P 4.—*Feb. 1926 to date Detailer, Checker and Designer, Turner Constr. Co., New York City, investigating and reporting on building codes, estimating, quantity surveying; responsible for checking of plans, design of structures, estimates of costs and quantities for various buildings; since Feb. 1930 (evenings) also Instructor in principles and theory of reinforced concrete design and construction, School of Technology, Coll. of City of New York. *TT 4.8: P 4.8: RC 1.4: D 1.—TT 8.8: P 8.8: RC 1.4: D 1.* Refers to E. K. Abberley, R. E. Goodwin, F. O. X. McLoughlin, H. C. Paddock, A. C. Stiefel.



41

(13) **STANLEY, OWEN GARRETT**, 1000 California Fruit Bldg., Sacramento, Cal. (Age 48. Born Humeston, Iowa.) 1906 A. B. in Civ. Eng., Stanford Univ. *TT 4: P 4*.—June to July 1906 Draftsman, Southern Pacific Co., maintenance-of-way office, San Francisco, Cal. *TT 0.1: SP 0.1*.—Aug. 1906 to date with U. S. Engr. Office, as follows: Aug. 1906 to July 1907 Draftsman on field surveys and in office; Aug. 1907 to Oct. 1909 Transitman and Inspector (after Dec. 1909 rated as Jun. Engr.) on field surveys and construction; Nov. 1909 to July 1917 Jun. Engr., until April 1913 acting as Chf. of Party on surveys, etc., then in charge (under Dist. Engr.) of maintenance work (for navigation) on Sacramento River; Aug. 1917 to Dec. 1919 Asst. Engr., in charge (under Dist. Engr.) of flood-control work on Lower Sacramento River; Jan. 1920 to Sept. 1926 Asst. Engr., Oct. 1926 to Oct. 1929 Engr., and Nov. 1929 to date Senior Engr., in charge (under Dist. Engr.) of engineering and field operations of office, including carrying out of flood-control project and navigation projects on Sacramento, San Joaquin and Mokelumne Rivers; since 1921 has also done considerable private work. *TT 23.1: SP 1.3: P 21.8: RC 20.8: D 0.9*.—*TT 27.2: SP 1.4: P 25.8: RC 20.8: D 0.9*. Refers to E. N. Bryan, R. L. Egenhoff, F. H. Fowler, J. W. Gross, C. R. Hall, H. M. Rich.

42

(1) **STEWART, GEORGE THOMAS**, 8402 Fourth Ave., Brooklyn, N. Y. (Age 50. Born Smyrna, Me.) 1904 B. S., Univ. of Me. *TT 4: P 4*.—Oct. 1904 to April 1905 drafting and tracing for Chicago Bridge & Iron Works. *TT 0.3: SP 0.3*.—Aug. 1905 to Dec. 1907 Asst. Engr., Illinois Central R. R., 4 months as Inspector on reinforced concrete and 2 years in charge of maintenance, Louisiana Div., designing and building sidings and yards, including new Jackson (Miss.) yard. *TT 2.2: SP 0.2: P 2: RC 2: D 0.5*.—Jan. 1908 to July 1913 Res. Engr., Grand Trunk Pacific Ry., on heavy rock construction, in charge of four 9-mile residencies. *TT 4.5: SP 0.5: P 4: RC 4: D 0.2*.—July 1913 to July 1915 developing a silver lead prospect. —July 1915 to July 1919 Asst. Engr., Chicago Rock Island & Pacific Ry., 2 years on track elevation and 2 years Special Engr. Asst. to Chf. Engr., figuring economies and in charge of experimental rail, ties and connections. *TT 3: SP 1: P 2: RC 2: D 0.4*.—Aug. 1919 to Jan. 1923 Chf. Engr., Cuba R. R., Camaguey, Cuba, on maintenance and construction; also built modern terminal, shops, round house, yards, transfer tables, 40 miles new work, etc. *TT 3.5: P 3.5: RC 3.5: D 0.2*.—Oct. 1924 to April 1927 Gen. Supt. for John W. Fox, El Reno, Okla., on deep foundations for bridges, etc., requiring steel sheet piling, rigs, etc., and built all concrete structures. *TT 2.6: P 2.6*.—April 1927 to Oct. 1928 (part of time) Supt. of lining with concrete, Chicago San. Dist.—Oct. 1928 to July 1930 with Sanderson & Porter, New York City, until May 1929 as Appraiser on Chicago Elevated R. R., having charge of steel computations and reproductions of bridge foundations, and after June 1929 Res. Engr. on dams at Cerro de Pasco, Peru, S. A., building a concrete face dam with rock fill; made survey, figured areas, water stored, designed earth-fill dam, estimated dredging and supervised construction of rock dam; also built 100-ft. Howe truss to carry 10-ton truck. *TT 1.7: P 1.7: RC 1: D 0.1*.—At present not on engineering.—*TT 21.8: SP 2: P 19.8: RC 12.5: D 1.4*. Refers to R. Birbeck, R. H. Ford, C. A. Morse, C. P. Richardson, B. B. Shaw, I. L. Simmons.

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(11) **THOMPSON, PERCY EDWARD**, 4225 Clinton St., Hollywood, Cal. (Age 29. Born San Miguel, Cal.) Registered Civ. Engr., State of California.—Sept. 1922 to Feb. 1925 student in Civ. Eng., Univ. of California. *TT 1: P 1*.—March to Nov. 1925 Asst. Engr. with Mark M. Falk, Cons. Structural Engr., Los Angeles, Cal., inspecting alignment, erection, rivet testing, on Orpheum Bldg., shop inspecting, erection, alignment, and field riveting on El Capital Theatre Bldg. *TT 0.6: SP 0.2: P 0.4: RC 0.4*.—Dec. 1925 to date with Road Dept., Los Angeles County, Cal., first as Draftsman, later with culvert squad designing catch basins, box culverts, and manhole frame and covers, prepared working plans for two pedestrian tunnels, etc., and since Aug. 1927 with Bridge Div., on preliminary designs, plans, etc., with estimates or bill of materials, for wood, steel and concrete structures (approx. \$1,000,000), including a 7-span multiple arch. *TT 4.7: SP 0.2: P 4.5: RC 3.9: D 3.9*.—*TT 6.3: SP 0.4: P 5.9: RC 4.3: D 3.9*. Refers to W. D. Armstrong, W. H. Baker, Jr., E. A. Burt, O. F. Cooley, M. M. Falk, G. W. Jones, H. F. Pope.

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(4) **THOROUGHGOOD, ROBERT WILLIAM**, 46 East Delaware Ave., Newark, Del. (Age 50. Born Georgetown, Del.) 1902 C. E., Lehigh Univ. *TT 4: P 4*.—June 1902 to Sept. 1904 Asst. Engr., Baltimore & Ohio R. R., Staten Island Terminals, N. Y., on survey of yards and terminals, soundings for harbors and docks, office planning and drafting, and (part of time) with New York, Westchester & Boston R. R., on surveys. *TT 2.2: P 2.2: D 0.2*.—Sept. 1905 to June 1907 Instructor in Civ. Eng., Cornell Univ.; also student in

sanitation and mining.—June to Sept. 1907 Asst. Engr., McClintic-Marshall Constr. Co., Pittsburgh, Pa., on design of erection equipment for steelwork. *TT 0.2: P 0.2: D 0.2.*—Sept. 1907 to Jan. 1908 Asst. Engr., Missouri Pacific Ry., St. Louis, Mo., in charge of party investigating and laying out industrial and mining branches, surveys of stations and yards. *TT 0.3: P 0.3: RC 0.3.*—Sept. 1908–June 1912 Instructor in Civ. Eng., Lafayette Coll., in charge of courses in railroads and surveying. *TT 3.8: P 3.8: RC 3.8.*—Oct. 1919 to Feb. 1920 Asst. Engr., State Highway Dept., Dover, Del., in charge of party establishing proposed highway routes in Sussex and Kent Counties. *TT 0.3: P 0.3: RC 0.3.*—Sept. 1912 to Oct. 1919 and Feb. 1920 to date Prof. of Civ. Eng., in charge of Civ. Eng. courses, equipment, instruction and expenditures, until Oct. 1919 at Univ. of Florida, and since Feb. 1920 at Univ. of Delaware; summers 1925 and 1926 Engr., Maryland Steel Plant, Bethlehem Steel Co., Wilmington, Del., on installation of oil-storage system and Foamite fire protection; summers 1928–1930 Computer, U. S. Engr. Office, Wilmington, Del., on triangulations, canal tides and currents. *TT 17.9: P 17.9: RC 17.9: D 0.9.*—*TT 28.8: P 28.8: RC 22.4: D 1.3.* Refers to S. A. Becker, R. J. Fogg, R. P. Howell, S. W. Sawin, J. J. Sweeney.

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(7) **TILLSON, HAROLD LUTHER**, 109 Eighth St., Des Moines, Iowa. (Age 41. Born Aurora, Ill.) Aug. to Nov. 1908 and June 1912 to Sept. 1916 with Chicago Northwestern Ry., as Chainman, Rodman, Instrumentman and Asst. Engr. on physical valuation, including directing field surveys, office computations, tabulations and reports. *TT 3.9: SP 0.6: P 3.3: RC 1.4.*—Nov. 1908 to Sept. 1910 Rodman, Chicago, Burlington & Quincy R. R. *TT 0.9: SP 0.9.*—Sept. 1916 to July 1922 Field Engr., Dist. Engr., Portland Cement Association, Chicago, Ill., on theory, research, specifications, design and construction of concrete and concrete structure, particularly pavement. *TT 5.8: P 5.8: RC 2.2: D 0.6.*—July 1922 to date Constr. Engr., Asst. Chf. Engr. and Chf. Engr., American Vibrolithic Corporation, Des Moines, Iowa, in direct charge of research, design, specifications and construction of vibrolithic concrete and interlocking bituminous pavement; directed construction of about 6½ sq. miles. *TT 8.5: P 8.5: RC 7: D 1.5.*—*TT 19.1: SP 1.5: P 17.6: RC 10.6: D 2.1.* Refers to R. W. Crum, N. D. Dean, A. R. Hirst, L. R. MacKenzie, G. W. Tillson, M. W. Watson.

46

(10) **TORRAS, RAYMOND WILLIAM**, City Hall, Atlanta, Ga. (Age 38. Born Brunswick, Ga.) 1911 to 1912 Tapeman and Helper with various surveyors. *TT 0.6: SP 0.6.*—1912 to 1913 Rodman and Asst. Estimator on line and grade revision and Asst. Timber Cruiser, Live Oak, Perry & Gulf R. R. Co. *TT 0.5: SP 0.5.*—1913 to 1914 Draftsman and Instrumentman with D. B. Roberts, Valuation Eng. Contr., Bunnell, Fla., being Prin. Asst. to Valuation Engr. on inventories for various short-line railroads. *TT 1.1: SP 0.1: P 1.*—1914 to 1916 Draftsman, Charleston & Western Carolina Ry. Co., on valuation maps and profiles. *TT 1.8: P 1.8.*—1916 to 1918 and 1923 to 1924 (except about 1 month with U. S. Army) Draftsman, Chesapeake & Ohio Ry. Co., estimating, yard design, general work in Chf. Engr.'s office, etc. *TT 2.6: P 2.6: D 0.1.*—1918 to 1920 Chf. of Survey Party, about 4 months at U. S. Picric Acid Plant, staking out factory buildings, roads, railroads and wharves, and 1½ years with Atlantic Refining Co., Philadelphia, Pa., staking out pipe lines, buildings and tanks, also on hydrographic work and construction of wharves and trestles. *TT 1.5: P 1.5: RC 0.8.*—1922 to 1923 Engr. and Inspector, Seaboard Air Line Ry. Co., field and office work. *TT 1: P 1.*—1921 to 1922 and 1924 to date with City of Atlanta, until 1922 as Asst. Engr. and Draftsman on map making and city planning details, including zoning, etc., and since 1924 Engr. and Secy., City Planning Comm., in charge of office. *TT 8.3: P 8.3: RC 6.8: D 5.5.*—*TT 17.4: SP 1.2: P 16.2: RC 7.6: D 5.6.* Refers to A. C. Copland, W. A. Hansell, C. W. Johns, J. H. Johnston, C. E. Kauffmann, V. G. Watters, C. C. Whitaker.

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(13) **TURNER, JAMES HENRY**, 206 Kirkham St., San Francisco, Cal. (Age 32. Born San Francisco, Cal.) Registered Civ. Engr., State of California.—Aug. 1919 to May 1921 student, Coll. of Mech. Eng., Univ. of California. *TT 1: P 1.*—May 1918 to July 1919 (except 1 month with U. S. Army) Draftsman, Pacific Coast Shipbuilding Co., laying out and drafting on steel ship construction. *TT 0.5: SP 0.5.*—June to July 1921 Levelman, Pacific Gas & Elec. Co., on transmission-line location. *TT 0.1: SP 0.1.*—Aug. 1921 to June 1922 Asst. Foreman, Pacific Coast Glass Co., San Francisco, Cal., on bottle production and installation and operation of automatic machinery. *TT 0.4: SP 0.4.*—July 1922 to date with City of San Francisco, on Hetch Hetchy Project, until Jan. 1924 as Surveyor and Inspector, handling surveys, supervising excavation and inspecting concrete lining, Pulgas Tunnel; Feb. 1924 to Jan. 1926 Inspector and Asst. Constr. Engr. on construction of riveted steel pipe line (20 miles), submarine pipe line, bridges, trestles, anchors, valve-houses, etc., Bay Crossing Div.; Feb. 1926 to Jan. 1927 Eng. Draftsman, drafting, reports,

etc.; since Feb. 1927 Asst. Engr. on drafting, estimates, statistics, specifications, reports, etc.; also reports, investigations and inventories for acquisition of Spring Valley Water Co. *TT 7.9: SP 0.5: P 7.4: RC 3: D 0.5.—TT 9.9: SP 2.5: P 7.4: RC 3: D 0.5.* Refers to R. L. Allin, N. A. Eckart, M. M. O'Shaughnessy, C. R. Rankin, O. Speir, L. W. Stocker.

## 48

(1) VIDAL, SEVERO, Delicias 1149-C, Santiago, Chile. (Age 35. Born Valparaiso, Chile.) 1920 C. E., Univ. of Santiago, Chile. *TT 4: P 4.*—April 1926 to Aug. 1927 Elec. Engr., Chilean Elec. Co., Santiago, Chile, in charge of design and installation of facilities for lighting and power. *TT 1.3: P 1.3: RC 1.3: D 1.3.*—July 1920 to April 1926 and Aug. 1927 to date with Reclamation Bureau of Chile, until April 1921 as Designing Engr. in charge of design of masonry dam (\$400 000), prepared report on manufacturing of paper in Chile, hydrological work; remainder of time Chf. Engr., 5 years in charge of distribution of water and granting of concessions for use of water, hydrology and runoff studies and preparation of tables, and design and supervision of construction of dam (\$500 000); since Aug. 1927 in charge of design and construction of Hunttil (earth-fill, 139 ft. high, \$1 500 000) and Purisima (60 ft. high, \$70 000) dams, also of granting concession for use of water for irrigation, hydro-electric power, municipal and industrial water supply, etc.; Chilean delegate to World Power Conference. *TT 9: P 9: RC 9: D 9.—TT 10.3: P 10.3: RC 10.3: D 10.3.* Refers to E. H. Burroughs, Jr., A. E. Crane, G. Dunn, J. B. Girard, F. R. Harris, L. A. Robb, S. W. Stewart, A. Streiff, C. P. Williams.

## 49

(1) VIZCARRONDO, JULIO ENSEBIO, 4 McKinley St., Santurce, Porto Rico. (Age 21. Born Ponce, Porto Rico.) 1930 B. S. C. E., Syracuse Univ. *TT 4: P 4.*—Aug. 1930 to date Superv. Engr., Dept. of Interior, San Juan, Porto Rico, on construction of buildings at Insular Tuberculosis Sanatorium, Rio Piedras, Porto Rico. *TT 0.4: P 0.4: RC 0.4.—TT 4.4: P 4.4: RC 0.4.* Refers to E. F. Berry, R. J. F. Lucchetti, L. Mitchell, F. Pons, R. Ramirez, S. D. Sarason.

## 50

(12) WARNER, EDGAR LESLIE, 4607 North Thirty-First St., Tacoma, Wash. (Age 40. Born Leola, S. Dak.) 1911 to 1914 (3 years) student, Eng. Dept., Univ. of Wash. *TT 1.5: P 1.5.*—May 1915 to Sept. 1917 member of firm, Warner & Son, Constrs., constructing state highway bridges, pumping plants, irrigation works, pipe lines, installing machinery, etc. *TT 4.4: P 4.4.*—March 1918 to June 1919 Designer, Kilbourne & Clark, Seattle, Wash., electrical equipment. *TT 0.6: SP 0.6: D 0.6.*—July 1919 to Jan. 1927 Supt., Concrete Pipe Co., Seattle, Wash., on design and erection of buildings and machinery, designed and patented pipe-making equipment and supervised manufacture of concrete products. *TT 7.6: P 7.6: RC 7.6: D 3.*—Feb. 1927 to date Mgr., E. W. Harrison Pipe Co., Tacoma, Wash., manufacturing concrete sewer and culvert pipe, etc. *TT 2.9: P 2.9: RC 2.9.—TT 17: SP 0.6: P 16.4: RC 10.5: D 3.6.* Refers to J. A. Arntson, C. D. Forsbeck, O. H. Hallberg, C. M. Howard, W. A. Kunigk, E. L. Strandberg.

## 51

(9) WESTINGHOUSE, GEORGE FRANK, 1252 South High St., Columbus, Ohio. (Age 22. Born Columbus, Ohio.) 1930 B. C. E., Ohio State Univ. *TT 4: P 4.*—Summer 1929 with Water Resources Branch, and July 1930 to date Jun. Engr. (Topographic), U. S. Geological Survey. *TT 0.3: P 0.3.—TT 4.3: P 4.3.* Refers to C. T. Morris, J. C. Prior, R. C. Sloane.

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(4) WESTON, JAMES WILLIAM, 20 Old York Rd., Willow Grove, Pa. (Age 34. Born Swinton, Manchester, England.) March 1912 to March 1914 Apprentice, Eng. Dept. and Machine Shop, Matthew & Yates Co., Ltd., Swinton, Manchester, England, heating and ventilating, dust collecting, etc. *TT 1: P 1.*—April 1914 to March 1916 Draftsman on detailing and layout work, until Sept. 1914 with Baldwin Locomotive Works, Philadelphia, Pa., then with Sturtevant Heating & Ventilating Co., Camden, N. J. *TT 1: SP 1.*—April 1916 to April 1917 Erector, Link Belt Eng. Co., Philadelphia, in structural layout shop and erecting conveying machinery. *TT 0.5: SP 0.5.*—May 1917 to Nov. 1918 with U. S. Army Engrs., 8th Mounted, El Paso, Tex., on bridge building, railroad-track laying, Topographical Sec.; Instructor, Co. 7, Engr. Officers' Training School, Camp Humphreys, Va. *TT 0.8: SP 0.8.*—Dec. 1918 to Nov. 1919 Draftsman, Klauder Weldon Dyeing Machine Co., Bethayres, Pa., on layout and design of textile dyeing and washing machinery. *TT 1: P 1.*—Dec. 1919 to Oct. 1920 Draftsman, Stokes & Smith Co., Summerdale, Philadelphia, designing paper-box machinery. *TT 0.9: P 0.9.*—Nov. 1920 to Aug. 1921 Draftsman, Philadelphia Drying Machine Co., designing tobacco and hosiery dryers, etc. *TT 0.8: P 0.8.*—Sept. 1921 to date with Philadelphia Rapid Transit Co., until Sept. 1927 as Draftsman on trolley car and bus design, general civil and mechanical engineering, and since then Eng.



Asst. in charge of buildings and heating plants; supervised and has had charge of construction of Mitten Bldg. (22 stories), banks, bus garages, repair and paint shops, boiler room, etc., reconstruction of buildings, stores, garages, bus terminal, etc. (described in detail in application); has charge of maintenance and operation of 78 heating plants, including 121 boilers (grate areas 2 sq. ft. to 78 sq. ft.); since Jan. 1930 also Township Commr., Upper Moreland Township, Pa., in charge of highways. TT 9.3: P 9.3: RC 3.3: D 4.—TT 15.3: SP 3.3: P 12: RC 3.3: D 4. Refers to J. H. M. Andrews, L. F. Parlette, J. A. Renshaw, W. R. Scanlin, R. J. Wolf.

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(4) ZENTMYER, DONALD BOOKWALTER, 233 South Walnut St., West Chester, Pa. (Age 37. Born Alexander, Pa.) June 1911 to July 1918 Asst. and Field Engr. with J. M. Africa, Huntingdon, Pa., on surveys, design and construction of streets, sewers, retaining walls, railroad location, sand and stone-quarry quantity estimates and surveys, etc. TT 3.5: SP 1.7: P 1.8: RC 1.5: D 0.6.—July 1918 to Jan. 1919 with U. S. Army, Instructor, Bowman Tech. School, Lancaster, Pa. TT 0.3: SP 0.1: P 0.2: RC 0.2: D 0.1.—Jan. 1919 to Sept. 1922 member of firm, Zentmyer & Fry, Huntingdon, Pa., on surveys, road, street and sewer design, supervising construction, expert testimony in survey cases, design of bridges, swimming-pools, etc. TT 2.7: P 2.7: RC 2.7: D 1.—Sept. 1922 to July 1923 Field Engr., until March 1923 with Day & Zimmerman Co., Philadelphia, Pa., then with Penn Water Power Co., Baltimore, Md., on right-of-way surveys for 110 miles of high-tension steel-tower transmission line, location, layout, inspection during early part of construction of 55 miles. TT 0.7: P 0.7: RC 0.7: D 0.1.—July to Oct. 1923 Supt. of Constr., Huntingdon (Pa.) County Agri. Association, preparing and building fair grounds, drainage, fencing, clearing, construction of buildings, roads, water system, etc. TT 0.3: P 0.3: RC 0.3: D 0.1.—Oct. 1923 to March 1924 Field Engr. with Gibbs & Hill, New York City, surveys for 30-mile transmission line and electrification of Virginian R. R. near Princeton, Va. TT 0.5: P 0.5: RC 0.5.—April 1924 to May 1925 Field Engr. for D. P. Robinson, New York City, on surveys for 30-mile steel-tower transmission line, 30-mile double-wood pole line in Pittsburgh, location, general construction design and inspection; topographical surveys (100 acres) and calculation railroad yard, Boston. TT 1.1: P 1.1: RC 1.1: D 0.3.—May to Nov. 1925 Field Engr. with Gibbs & Hill, New York City, on surveys, location, construction design, inspection and supervision, field engineering, electrification of Long Island R. R., Hell Gate Power House to Bay Ridge Yards. TT 0.6: P 0.6: RC 0.6: D 0.2.—Nov. 1925 to date with United Engrs. and Constrs., Inc., Philadelphia, until Sept. 1930 as Field Engr. on 125-mile double and single high-tension steel tower line, general inspection and design, temporary bridge and roads, submarine cable laying, Delaware River near Wilmington, Del., tidewater soundings, inspecting piling, design and erection of range targets; since Sept. 1930 Safety Engr. on new suburban station for Pennsylvania R. R. TT 5.1: P 5.1: RC 5.1: D 1.—TT 14.9: SP 1.8: P 13.1: RC 12.8: D 3.4. Refers to T. A. Currie, Jr., H. E. Ehlers, R. L. Faithorn, H. D. Johnson, Jr., J. T. Kiernan, J. B. Kingsolver, J. L. Orr.

## FOR TRANSFER

## FROM THE GRADE OF ASSOCIATE MEMBER

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(12) ALIN, AKE LUDVIG, Assoc. M., 315 Customhouse, Portland, Ore. (Elected July 6, 1920.) (Age 40. Born Gefle, Sweden.) 1915 C. E., Royal Technical Univ. of Stockholm, Sweden. TT 4: P 4.—July 1909 to Dec. 1910 Rodman, Chainman, Instrumentman and Inspector, on land surveying, railroad location and construction. TT 0.8: SP 0.6: P 0.2.—May to Dec. 1915 military service, Royal Corps of Engrs., Sweden.—Dec. 1915 to Sept. 1917 Designer, Bureau of Light and Power, City of Stockholm, Sweden, on hydro-electric power plant. TT 1.8: P 1.8: RC 1.8: D 1.8.—Oct. 1917 to Nov. 1922 Engr., Royal Swedish Board of Waterfalls, Stockholm, until March 1919 as Designer on hydro-electric power projects and dams, then in United States studying dam design and construction and after Oct. 1920 in charge of design and construction of two multiple-arch dams. TT 5.1: P 5.1: RC 3.7: D 2.7.—April 1923 to Jan. 1924 Designer and Field Engr., Constant Angle Arch Dam Co., San Francisco, Cal., on dams and irrigation projects. TT 0.8: P 0.8: RC 0.8: D 0.5.—Feb. 1924 to April 1926 Chf. Draftsman, The Foundation Co. of New York, San Francisco office, on design, estimating, inspection, plant layout for construction of Lake Almanor hydraulic-fill dam. TT 2.2: P 2.2: RC 2.2: D 1.—May to Sept. 1926 Engr., Steelform Contr. Co., San Francisco, Cal., on steel form work in building construction.



*TT 0.4: P 0.4: RC 0.4.*—Oct. 1926 to Dec. 1927 Designer, Washington Water Power Co., Spokane, Wash., in charge of design of dam for Chelan Project. *TT 1.2: P 1.2: RC 1.2: D 1.*—Jan. to July 1928 Designer with Stevens & Koon, Cons. Engrs., Portland, Ore., designing hydro-electric power project. *TT 0.6: P 0.6: RC 0.6: D 0.6.*—Aug. 1928 to Jan. 1930 Engr., Eugene (Ore.) Water Board, being Res. Engr. on dam and power house of Leaburg project. *TT 1.5: P 1.5: RC 1.5.*—Feb. 1930 to date Hydr. Engr., U. S. Engrs., Portland, Ore., assisting in selecting of power sites, designing dam and hydro-electric projects and power studies in connection with investigation for hydro-electric development of Columbia River. *TT 0.9: P 0.9: RC 0.9: D 0.9.*—*TT 19.3: SP 0.6: P 18.7: RC 13.1: D 8.5.* Refers to V. H. Greisser, M. J. Hvorslev, L. R. Jorgensen, C. A. McClain, F. A. Noetzli, H. A. Rands, J. C. Stevens.

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(5) **BISSELL, CHARLES ARTHUR**, Assoc. M., 12 Leland St., Chevy Chase, Md. (Elected June 16, 1919.) (Age 49. Born Navasota, Tex.) 1902 B. S., Austin Coll., Sherman, Tex. 1906 C. E., Univ. of Tex. *TT 4: P 4.*—June 1906 to Nov. 1908 Chalmman, Rodman, Inspector and Instrumentman in charge of party on construction and maintenance, Gulf, Colorado & Santa Fe Ry. *TT 1.2: SP 1.2.*—Nov. 1908 to date (except June to Nov. 1914 not on professional work) with U. S. Bureau of Reclamation as follows: Nov. 1908 to June 1910 Draftsman and Designer on irrigation structures, Sunnyside, Wash.; June 1910 to July 1911 Chf. Draftsman in charge of design of structures for Sunnyside main canal enlargement and for Prosser extension; July 1911 to June 1914 Asst. Engr., on Elephant Butte dam, in charge of field party on surveys, laid out and detailed mixing plant operating mechanism, being Chf. Concrete Inspector on flume block section (1½ years) and designing and detailing in El Paso (Tex.) office on balanced valves, sluice gates, gate tower, etc. (1½ years); Nov. 1914 to April 1919 Asst. Engr., in Washington, D. C., office, until April 1917 designing and detailing Grand Valley roller crest and Vandalia movable crest dams, Elephant Butte spillway, gates and outlet works, Keechelus and Sherburne Lakes dams, canal structures, etc.; April to Nov. 1917 Asst. Engr. and April 1919 to Nov. 1920 Engr., on design, computation and editorial work, review of plans, specifications and estimates, etc., preparing revised edition of handbook (hydraulic and excavation tables); Nov. 1917 to April 1919 Asst. Engr., and Nov. 1920 to March 1925 Engr., in charge of Eng. Sec., being Asst. to Director and Chf. Engr., supervising design and drafting, reviewing plans and specifications, and (as Engr.) writing and editing engineering reports; March 1925 to March 1930 Chf., Eng. Div., Washington office, being Asst. to Commr. of Reclamation, on similar work, also in responsible charge on field investigations, on swamp and overflow lands in Yazoo basin, Miss. (Sept. 1926–Feb. 1927) reclamation and rural development projects in south (April–May and July 1927, Aug.–Nov. 1928) Red Bluff project, Tex. (40 000 acres, including proposed \$3 000 000 Angeles dam) (Aug.–Dec. 1929); since March 1930 Engr. in Field Service at Large, in immediate charge in field of investigation of California water resources (co-operating with State), study of plans for utilization of water resources of Sacramento–San Joaquin valley and feasibility of measures for immediate relief of irrigated areas in southern San Joaquin Valley. *TT 20.9: SP 0.3: P 20.1: RC 14.1: D 9.8.*—*TT 26.1: SP 2: P 24.1: RC 14.1: D 9.8.* Refers to F. Adams, W. H. Code, H. J. Gault, L. C. Hill, J. Hinds, E. Hyatt, E. Mead, R. F. Walter, F. E. Weymouth, W. R. Young.

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(11) **BROCKWAY, WALDO EMERSON**, Assoc. M., 845 Fifteenth St., Boulder, Colo. (Elected Oct. 1, 1928.) (Age 40. Born Riverside, Iowa.) 1917 B. S. in Civ. Eng., and 1922 C. E., Univ. of Colo. *TT 4: P 4.*—Summers (while student) Asst. in City Engr.'s office, and June 1917 to Sept. 1918 Asst. City Engr. in charge of field work for paving, sewers, water supply, etc., Boulder, Colo. *TT 1.2: P 1.2.*—Sept. 1918 to date with Univ. of Colorado, until June 1920 as Instructor in Civ. Eng., summer 1919 in direct charge of construction of system of heating tunnels on campus, and since June 1920 Superv. Engr. in charge of structural design and construction of buildings, heating tunnels, sewers, water supply, paving, etc., and of maintenance of buildings and grounds (approx. \$150 000 annually); buildings constructed include Liberal Arts (\$315 000), Men's Gymnasium (\$350 000), Chemistry (\$245 000), Women's Gymnasium (\$200 000), Union Bldg. (\$165 000), Power Plant extension (\$70 000). *TT 13.5: P 13.5: RC 10.8: D 10.5.*—*TT 17.5: P 17.5: RC 10.8: D 10.5.* Refers to I. C. Crawford, C. L. Eckel, H. J. Gilkey, W. C. Huntington, M. S. Ketchum, J. B. Marcellus.

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(13) **BROWN, ELBERT CALVIN**, Assoc. M., 461 Market St., San Francisco, Cal. (Elected Jan. 6, 1915.) (Age 43. Born Clifton Hill, Mo.) 1909 B. S. in Civ. Eng., Univ. of Mo. *TT 4: P 4.*—June 1909 to June 1910 Rodman, and July 1910 to Feb. 1911 Jun. Engr., U. S. Reclamation Service, Powell, Wyo., acting as Instrumentman, Office man on earthwork computations, tracings, etc., and (after Oct. 1910) as Res. Engr. on canal construction.

*TT 1.2: SP 0.7: P 0.5.*—May 1911 to June 1918 with Bureau of Public Works, Philippine Islands, until March 1912 as Asst. Engr. at Manila, being Chf. of Party on road surveys, plans and estimates and (part of time) Res. Engr. on construction of minor road and bridge projects; after April 1912 Dist. Engr. at Tarlac (2 3/10 years), Albay (1 4/5 years) and Naga (1 3/5 years), in responsible charge of surveys, plans, construction and maintenance of highways, and construction of bridges and public buildings (\$150 000 to \$250 000 annually). *TT 6.6: P 6.6: RC 5.7: D 0.7.*—July 1918 to March 1919 Capt., Engrs., U. S. Army.—April 1919 to date Senior Highway Engr., U. S. Bureau of Public Roads, until May 1922 at Jackson, Miss., as Asst. to Engr. in charge of Federal Aid highway work in Mississippi and (after Aug. 1919) in charge reporting to Dist. Engr. at Montgomery, Ala. (expenditure \$4 000 000 annually); since June 1922 at San Francisco, in charge of Federal Aid highway work in Nevada, preparing plans and supervising construction (expenditure approx. \$2 000 000 annually), and since Jan. 1926 also in charge of plans for and construction of National Forest highways in East Central California and Nevada (\$2 500 000 annually). *TT 11.7: P 11.7: RC 11.7: D 3.8.*—*TT 23.5: SP 0.7: P 22.8: RC 17.4: D 4.5.* Refers to J. S. Bright, L. Brown, L. I. Hewes, H. M. Loy, G. W. Malone, L. W. Mashburn, C. C. Morris, C. H. Sweetser.

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(4) **BUCKLEY, THOMAS**, Assoc. M., 1020 Kenwyn St., Frankford, Philadelphia, Pa. (Elected July 6, 1925.) (Age 47. Born Philadelphia, Pa.) Registered Prof. Engr., State of Pennsylvania. 1 year student in Civ. Eng., Temple Univ.—1901 to 1902 Draftsman, James Smith Machinery Co., on design and construction of power transmissions, including estimates and measurements for installations and repairs. *TT 1: SP 1: D 1.*—1903 to 1904 Structural Draftsman with Snyder & Howell, detailing and designing highway bridges, reduction plants, coal-handling equipment and turntables. *TT 1: SP 0.5: P 0.5: D 0.5.*—1904 to 1905 Draftsman, Standard Pressed Steel Co., on design of various details for power-transmission lines. *TT 0.8: P 0.8: RC 0.8: D 0.8.*—1905 to date with Bureau of Surveys, Dept. of Public Works, Philadelphia, Pa., as follows: 1905 to 1911 Draftsman on contract drawings and estimates for highway construction and maintenance, including grading, sewers, paving, repaving, etc., determining areas, establishing boundary line, planning extensions and revision of street systems; 1912 to 1916 First Asst. Surveyor, and 1917 to 1924 Prin. Asst. Surveyor, being Chf. of field parties on surveys for areas, boundaries, highway improvements, sewer (open cut and tunnel) and bulkhead construction and pier extensions, also (after 1917) for grade crossing eliminations, city transit extensions and sewage-disposal projects and surveys and estimates for highway improvements and bridge construction; 1925 to 1927 Surveyor and Regulator, 15th Dist., directing and supervising surveying and engineering for establishment and administration of city plan, including estimates, plans and assessment of costs for municipal improvements; since 1928 Asst. Chf. Engr. and Surveyor, directing and supervising surveying and engineering for sixteen survey districts, preparing estimates, plans, ordinances, and reports for city planning and replanning of Philadelphia; also (evenings) Instructor, Civ. Eng. Dept., Temple Univ. (1911 to 1912) and Drexel Inst. (1920 to date). *TT 25.3: P 25.3: RC 18.3: D 9.1.*—*TT 28.1: SP 1.5: P 26.6: RC 19.1: D 11.4.* Refers to J. Adler, G. H. Biles, C. E. Myers, S. H. Noyes, G. H. Shaw, A. G. Singer, C. H. Stevens.

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(1) **CRAIGMILE, CHARLES JAMES**, Assoc. M., Sunset Road, Pompton Plains, N. J. (Elected Oct. 14, 1919.) (Age 41. Born Gifford, Ill.) 1913 B. S. in Civ. Eng., Univ. of Ill. *TT 4: P 4.*—June to Aug. 1913 Asst., Eng. Corps, Pennsylvania R. R., double tracking and culvert work. *TT 0.1: SP 0.1.*—Sept. 1913 to June 1914 Instrumentman, Morgan Eng. Co., Memphis, Tenn., in charge of level and transit party on drainage work. *TT 0.8: P 0.8: RC 0.8.*—Aug. to Dec. 1914 Jun. Highway Engr., State Highway Dept., Springfield, Ill., in charge of construction of concrete and brick road (4 miles). *TT 0.3: P 0.3: RC 0.3.*—Jan. 1915 to July 1916 Rodman, Interstate Commerce Comm., signal valuation railroad work. *TT 0.8: SP 0.8.*—July 1916 to May 1917 Instrumentman, Chicago, Burlington & Quincy R. R., roadway and track valuation. *TT 0.8: P 0.8: RC 0.8.*—May 1917 to Dec. 1918 with U. S. Army, until Nov. 1917 at Reserve Officers' Training Camp, Ft. Snelling, Minn., being candidate for commission and Instructor in mapping, then 1st Lieut., Infantry, Cavalry and Artillery.—Dec. 1918 to date with North Jersey Water Supply Comm., until Jan. 1922 as Asst. Engr. in charge of preliminary surveys and office work, and since Jan. 1922 First Asst. Engr. to Asst. Chf. Engr. in charge of construction of Wanaque Project (\$25 000 000), including Wanaque Reservoir (about 30 000 000 000 gal., 6 1/2 miles long), relocation of about 6 miles of single-track railroad and 6 1/2 miles of highway, involving rock and earth excavation, heavy culverts, bridges, etc.; clearing of Wanaque Reservoir and clearing and grubbing about 2 500 acres with swamp drainage, etc., Wanaque headworks,

consisting of pumping station, service building, control house, lower gate house and landscaping, involving chlorination and metering for 150 000 000 gal. daily, Wanaque Aqueduct, 20 miles of pressure aqueduct, 170 000 ft. of 74-in. steel pipe, also fencing, surveys, water-supply studies, etc. *TT 12: P 12: RC 12: D 1.—TT 18.8: SP 0.9: P 17.9: RC 13.9: D 1.* Refers to G. W. Fuller, N. C. Holdredge, A. H. Pratt, A. L. Sherman, M. R. Sherrerd, R. S. Weston.

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(1) **GODFREY, WILLIAM B.**, Assoc. M., Box 2012, Cristobal, Canal Zone. (Elected Jan. 19, 1925.) (Age 44. Born Madison, Kana.) 1906 to 1910 (3 years) student in Civ. Eng., Univ. of Washington. *TT 1.5: P 1.5.*—June 1910 to Jan. 1912 Deputy County Engr., Port Townsend, Wash., instrument work on road location and construction, office computation and drafting. *TT 1.5: P 1.5.*—Sept. 1912 to March 1913 Jun. Topographer, U. S. Geological Survey, being Recorder on primary traverse, triangulation and levels. *TT 0.2: SP 0.2.*—March to Aug. 1913 Draftsman, Oro Elec. Co. and Chf. of Party, The Lewis Colony, Cal., on topographic surveying and land subdivision, in charge of survey camp. *TT 0.5: P 0.5: RC 0.2.*—Aug. 1913 to Oct. 1914 Draftsman, topographic, The Panama Canal, and Transitman, Div. of Landscape Archt., on layout and construction of streets, buildings, sewers, etc., in Balboa, Canal Zone. *TT 1.2: P 1.2: RC 1.*—Oct. 1914 to Dec. 1917 and Nov. 1919 to Oct. 1923 with Sec. of Surveys, The Panama Canal, as Transitman, Levelman, being Chf. of Party in charge of field surveys on precise levels, triangulation and survey of international boundary, and (after Nov. 1919) Jun. Engr. on similar work for boundary and on survey for hydro-electric project; 1922 to 1923 (vacation) Engr., Panama Gulf Oil Co., on surveys, involving observations for latitude, longitude and azimuth. *TT 7: P 7: RC 6.2.*—Dec. 1917 to Nov. 1919 Lieut., 602d Engrs., U. S. Army, 1 year on road and bridge construction in France. *TT 1.9: P 1.9: RC 1.*—Oct. 1923 to date with Div. of Mun. Eng., The Panama Canal, until Dec. 1925 as Jun. Engr. on surveys, designs, estimates and specifications for pipe lines, pumping stations, reservoirs, roads, sidewalks, culverts, retaining walls, etc., in Canal Zone and City of Panama; Jan. 1926 to July 1929 Asst. Engr. on similar work and in charge of engineering in Northern Dist.; since Aug. 1929 Supt. in charge of Northern Dist. *TT 7.2: P 7.2: RC 7: D 6.—TT 21: SP 0.2: P 20.8: RC 15.4: D 6.* Refers to J. G. Claybourn, R. C. Jones, A. Onderdonk, E. S. Randolph, J. L. Schley.

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(4) **JOHNSTON, CHARLES**, Assoc. M., Sixteenth and Washington Ave., Philadelphia, Pa. (Elected Oct. 1, 1926.) (Age 48. Born in Boletourt County, Va.) 1902 Va. Mil. Inst.—July 1902–Aug. 1910 Rodman, Transitman and Asst. Div. Engr., M. of W., Baltimore & Ohio R. R. Co. *TT 5.7: SP 2.3: P 3.4: RC 1.2.*—Jan. 1911 to Oct. 1914 Sales Engr. and mill engineering, Dilworth Porter & Co., Pittsburgh, Pa., on rolling mill operation, specializing in track devices. *TT 3.7: P 3.7.*—Dec. 1914–July 1915 Engr. (3 months) and Supt. of Constr. (5 months) on construction of buildings, Pittsburgh Provision & Packing Co., Herr's Island. *TT 0.7: P 0.7: RC 0.4.*—Aug. 1915–Jan. 1926 (except April 1917 to June 1919 Capt., Infantry, U. S. Army) Sales Engr. and Dist. Sales Mgr., General Fireproofing Co., Youngstown, Ohio. *TT 8.4: P 8.4.*—Feb. 1926–Feb. 1927 Sales and engineering, structural, Jones & Laughlin Steel Corporation, Pittsburgh, on development of junior beam. *TT 1.1: P 1.1.*—March 1927 to date Branch Mgr., Berger Manufacturing Co., Philadelphia, Pa., in charge of sales and engineering work; since June 1928 Capt. on Emergency Officers Retired List, U. S. Army. *TT 3.8: P 3.8: RC 3.8.—TT 23.4: SP 2.3: P 21.1: RC 5.4.* Refers to J. H. M. Andrews, C. E. Billin, C. S. Boardman, H. L. Bowman, C. de Moll.

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(9) **JONES, PUSEY**, Assoc. M., 1020 Temple Bar Bldg., Cincinnati, Ohio. (Elected Junior, March 6, 1906; Assoc. M., April 30, 1912.) (Age 50. Born Wilmington, Del.) 1902 B. C. E. and 1909 C. E., Univ. of Delaware. *TT 4: P 4.*—June 1902 to July 1903 Rodman, Philadelphia, Baltimore & Washington R. R. *TT 0.5: SP 0.5.*—July 1903 to May 1905 Asst. Engr., E. I. du Pont Co., Wilmington, Del., in charge of topographical surveys and maps of mills and property. *TT 1.8: P 1.8: RC 1.8.*—May to July 1905 Res. Engr. on dam and power-house construction near Lancaster, Pa., made preliminary surveys and maps. *TT 0.2: P 0.2: RC 0.2.*—Aug. 1905 to Aug. 1911 Structural Draftsman, and Aug. 1911 to March 1912 Asst. Engr., Structural Dept., New York, Westchester & Boston Ry., being First Asst. to Structural Engr. and (under his direction) made designs, was responsible for drawings and made or checked stress sheets for viaducts (700 to 2 100 ft. long), a subway (3 900 ft. long), bridges for street crossings, etc., checked details, made stress sheets for concrete arches (plain and reinforced); also assisted in examination of bridges for Cons. Engr., including suspension highway bridge (1 150 ft. long). *TT 6.6: P 6.6: RC 6.6: D 6.6.*—March 1912 to April 1914 with Georgia Coast and Piedmont R. R., until Jan. 1913 as Prin. Asst. Engr., then Chf. Engr., designing and constructing a 15-mile extension, Darien



to Brunswick, Ga., including four miles of bridge work and two draw spans. *TT 2.1: P 2.1: RC 2.1: D 0.5.*—Aug. 1914 to April 1916 member of firm, Atlantic Eng. Co., Savannah, Ga., in charge of structural design and construction, including highway bridge with draw span over St. Johns River at Sanford, Fla. *TT 1.7: P 1.7: RC 1.7: D 0.5.*—April 1916 to May 1928 Chf. Structural Draftsman, Boston & Maine R. R., in responsible charge (under Engr. of Structures) of design of and repairs to structures; 1917 to 1919 Acting Engr. of Structures. *TT 12: P 12: RC 12: D 12.*—June 1928 to date with Cincinnati Union Terminal Co., until July 1929 as Asst. Structural Engr., preparing designs and estimates for proposed Union Passenger Terminal for seven railroads (estimated cost \$40 000 000), and since July 1929 Structural Engr., in charge of design of bridges for the terminal, including two double-track viaducts, 3 700 ft. and 2 400 ft. long), a double-deck concrete highway viaduct (3 300 ft. long) and numerous smaller structures. *TT 2.6: P 2.6: RC 2.6: D 2.6.*—*TT 31.5: SP 0.5: P 31: RC 27: D 22.2.* Refers to J. M. Belknap, J. C. V. Christensen, E. W. Clark, B. W. Guppy, J. E. Root, G. P. Stowitts, H. M. Waite.

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(9) KRAZ, HENRY HUGO, Assoc. M., 1319 Franklin Ave., Cincinnati, Ohio. (Elected Nov. 25, 1919.) (Age 44. Born Cincinnati, Ohio.) 1911 B. C. E., Univ. of Cin. *TT 4: P 4.*—Jan. 1906 to July 1907 Axeman and Instrumentman, Denver & Salt Lake R. R. *TT 0.7: SP 0.7.*—Oct. 1907 to May 1911 (while student) Rodman, Instrumentman, Student Asst., etc., on surveys, drafting, etc. at Univ. of Cincinnati.—Summer 1910 Inspector, Bureau of Municipal Research of Cincinnati, on preparation of sub-grade and concrete base for highways and construction of wood block and granite streets, granite curb, gutters, sewers, etc.—May to July 1911 with Ferro-Concrete Constr. Co., Cincinnati, as Asst. Supt. on reinforced concrete school building and Supt. on reinforced concrete cantilever retaining wall construction. *TT 0.2: P 0.2: RC 0.2.*—Aug. 1911 to Sept. 1917 and May to Aug. 1919 with War Dept., U. S. Engr. office, 1st Dist., Cincinnati, after 1912 as Jun. Engr., until Jan. 1913 on steel and iron hull towboat and dredge design and construction, 6 months being Chf. Inspector of construction of three steel hull towboats; Feb. 1913 to Sept. 1917 on design and construction of works for channel improvement and construction of Ohio River dams, being Engr. in charge of construction of Ohio River Dam No. 31 (\$1 500 000), and after May 1919 checking plans for Ohio River dams and designing and making calculations for small towboats with fuel oil engine. *TT 6.5: P 6.5: RC 3.3: D 2.3.*—Sept. 1917 to April 1919 with U. S. Army as 1st Lieut. and after Sept. 1918 Capt., Engrs., at 2d Engrs. Officers' Training Camp, Ft. Leavenworth, with 314th Engrs., Camp Funston, Kans., and (after March 1918) with Headquarters Div. of Constr. and Forestry, Office of Chf. Engr., A. E. F., France, on construction of warehouses, hospitals, barracks, railroads, docks, etc.; after September 1918 Asst. to Chf. of Administration Sec. of Div. *TT 1.6: P 1.6: RC 1.2.*—Aug. 1919 to Dec. 1920 with Proctor & Gamble Co., Cincinnati, as Engr. in charge of construction of food product plant in Dallas, Tex., being Company's Representative; work included construction of seven buildings, underground piping, fire, water and sewer systems, yard layout, oil storage tanks, etc. (\$1 500 000), installation of boiler-house and engine-room equipment, tanks, filter presses, bleachers, pumps, deodorizer, etc. (\$1 500 000). *TT 1.2: P 1.2: RC 1.2.*—Nov. 1920 to May 1924 Supt. of Constr., Stacey Bros. Gas Constr. Co., Cincinnati, Designers, Fabricators and Erectors of gas plants and equipment, in responsible charge of all field construction for work in United States and foreign countries (\$1 500 000 annually); purchased modern equipment, had radial derricks, gantrys, etc. designed and built in shops, installed field cost system, coordinated shop and field work, planned layouts from site plans and from personal visits to larger jobs.—*TT 3.5: P 3.5: RC 3.5.*—May 1924 to May 1926 Supt. of Erection, Pennsylvania Eng. Works, New Castle, Pa., Designers, Erectors and Fabricators of blast furnaces and steel and gas plant equipment, assisted in developing department of gas-plant equipment, had charge of all erection, including blast furnaces, estimated erection costs, made up bids and specifications for gas-plant equipment, on President's Advisory Committee, etc. *TT 2: P 2: RC 2.*—May 1926 to date Supt. of Highway Maintenance, Dept. of Highways, City of Cincinnati, in responsible charge of maintenance and repair of highways, bridges, viaducts, etc. and of operation of plants and yards, maintenance of equipment, etc. (over \$1 000 000 annually); also Lecturer in Highway Eng., (evening courses), Univ. of Cincinnati. *TT 4.5: P 4.5: RC 4.5.*—*TT 24.3: SP 0.7: P 23.6: RC 17: D 2.3.* Refers to E. D. Gilman, F. L. Raschig, J. E. Root, H. Schneider, C. O. Sherrill.

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(2) MYLCHREEST, GEORGE LEWIS, Assoc. M., 238 Palm St., Hartford, Conn. (Elected June 1, 1925.) (Age 46. Born Middletown, Conn.) 1907 B. S., Wesleyan Univ. 1910 S. B., Mass. Inst. Tech. *TT 4: P 4.*—June 1910 to March 1924 with Buck & Sheldon, as Draftsman, Inspector, Designer and finally in charge of designing and supervising construction



work; member of firm; had charge of design and supervision of construction, including many large industrial plants (some costing over \$500 000), bridges, dams, trestles, retaining walls, etc. *TT 12.7: SP 1: P 11.7: RC 11.7: D 11.*—March 1924 to date member of firm, Mylchreest & Reynolds, Cons. Engrs. & Archts., Hartford, Conn., general practice of engineering and architecture, in charge of structural design and supervision; has designed industrial plants (\$600 000 and less), also on structural detailing and plans for boiler plants for these industrial plants; consulting engineering includes bridges, retaining walls, coal trestles and storage bins, foundations, structural steel and reinforced concrete designs for many structures; served as expert on structural details in court cases. *TT 6.7: P 6.7: RC 6.7: D 6.7.*—*TT 23.4: SP 1: P 22.4: RC 18.4: D 17.7.* Refers to H. R. Buck, R. N. Clark, C. C. Elwell, J. T. Henderson, L. F. Peck, R. J. Ross, W. L. Ulrich.

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(5) **OGDEN, CHESTER WHITE**, Assoc. M., 502 Stanley Ave., Roanoke, Va. (Elected March 9, 1920.) (Age 44. Born Berryville, Va.) 1906 B. S. in Civ. Eng., Va. Pol. Inst. *TT 4: P 4.*—Sept. 1906 to May 1907 Asst. to City Engr., Roanoke, Va., making surveys and plans for, and estimating costs and superintending construction of sewers. *TT 0.3: SP 0.3.* May 1907 to Sept. 1909 and Jan. 1912 to Feb. 1914 with Roanoke (Va.) Bridge Co., until Sept. 1909 as Contr. Engr. on surveys, designs and estimates and selling highway bridges, and after Jan. 1912 Chf. Engr. in charge of Designing and Estimating and Drafting Depts. *TT 4.2: SP 0.1: P 4.1: RC 4.1: D 2.1.*—Feb. 1920 to July 1922 Asst. Engr., Bridge Designing Dept., American Bridge Co., New York office. *TT 2.4: P 2.4: RC 2.4: D 2.4.*—Sept. 1909 to Jan. 1912, Feb. 1914 to Feb. 1920 and July 1922 to date with Virginia Bridge & Iron Co., Roanoke, first two periods as Designing Engr. on designs and estimates of highway and railroad bridges, buildings, tanks, etc., also ship development, 6 months in mould loft, and 1 year Field Engr. in charge for Company at Doullut & Williams Shipbuilding Co., New Orleans, La.; since July 1922 Asst. Chf. Engr. in charge of Designing and Estimating Dept., Roanoke. *TT 16.7: SP 0.2: P 16.5: RC 16.5: D 13.5.*—*TT 27.6: SP 0.6: P 27: RC 23: D 18.* Refers to P. A. Blackwell, W. G. Grove, F. F. Harrington, S. J. Ott, L. P. Smithy, G. A. Tretter, F. P. Turner.

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(2) **PARKER, THEODORE BISSELL**, Assoc. M., 115 Woodlawn Ave., Wellesley Farms, Mass. (Elected Aug. 9, 1920.) (Age 41. Born Roxbury, Mass.) 1911 B. S., Mass. Inst. Tech. *TT 4: P 4.*—June 1911 to June 1912 Asst. Instructor, Civ. Eng. Dept., Massachusetts Inst. of Technology. *TT 0.9: SP 0.1: P 0.8.*—June to Dec. 1912 Draftsman with H. C. Keith, Cons. Engr., New York City, office investigation of highway and electric railway bridges. *TT 0.3: SP 0.3.*—Jan. 1913 to Dec. 1917 Asst. Hydr. Engr., Utah Power & Light Co., Salt Lake City, Utah, hydraulic and structural design in connection with construction of hydro-electric plants; efficiency tests, additions to operating property, etc. *TT 4.8: SP 0.3: P 4.5: RC 1.4: D 2.*—Jan. 1918 to March 1919 and Oct. 1920 to Nov. 1922 with U. S. Army, until March 1919 as 1st Lieut. and Capt., 26th Engrs., Co. Commander, Dist. Water Supply Officer, 3d Corps Area; 8 months with A. E. F., 3 months at Front; after Oct. 1920 Capt., being Regimental Adjutant, 7th Engrs.; Graduate, U. S. Engr. School; Instructor, C. M. T. C. & R. O. T. C.; Feb. 1924 to date Major, E. O. R. C. *TT 2.9: SP 0.5: P 2.4: RC 2.*—April 1919 to Sept. 1920 Asst. Hydr. Engr., Elec. Bond & Share Co., New York City, investigation and report on hydro-electric power sites and design of high-voltage transmission-line structures. *TT 1.5: P 1.5: RC 1.3: D 0.2.*—Dec. 1922 to June 1926 Engr., Hydr. Div., Stone & Webster, Inc., Boston, Mass., design of hydro-electric developments, including a 30 000-kw. development at Bartlett's Ferry, Ga. *TT 3.4: P 3.4: RC 2: D 3.4.*—July 1926 to Dec. 1929 Hydr. Engr., Stone & Webster, Inc. and Stone & Webster Eng. Corporation, on investigations, analyses and reports in connection with additions to hydro-electric properties. *TT 2.5: P 2.5: RC 2.5: D 0.5.*—Jan. 1930 to date Project Engr., Stone & Webster Eng. Corporation, in general charge of design of 60 000-kw. hydro-electric development at Rock Island, Wash. *TT 1: P 1: RC 1: D 1.*—*TT 21.3: SP 1.2: P 20.1: RC 10.2: D 7.1.* Refers to H. F. Anthony, H. A. Hageman, C. M. Spofford, G. R. Strandberg, W. F. Uhl, D. M. Wood.

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(10) **RAGSDALE, FRANK VICTOR**, Assoc. M., 818 Dermon Bldg., Memphis, Tenn. (Elected Oct. 14, 1919.) (Age 39. Born Aurora, Mo.) 1912 B. S. in C. E., Univ. of Mo. *TT 4: P 4.*—1908 to June 1912 (vacations and spare time) and June to Oct. 1912 with City of Columbia, Mo., as Inspector, Instrumentman and (after June 1912) Chf. Instrumentman and Asst. City Engr. on paving, sewers, etc. *TT 0.2: SP 0.2.*—Oct. 1912 to July 1919 Inspector (Res. Engr.) and Jun. Engr. (Div. Inspector and Office Engr.), U. S. Engr. Dept., Memphis, Tenn., on Mississippi river work, being Res. Inspector on levee construction (1 1/10 years) and in charge of construction of concrete flume and sewer through levees

(1 year); Div. Inspector in charge of construction and maintenance of northern part of Lower St. Francis levee system, including location and construction of new levees (3½ years); Office Engr. and Designer on original design of reinforced concrete barge for river work, etc. (1 3/10 years). *TT 6.3: SP 0.6: P 5.7: RC 5.7: D 1.3.*—July to Sept. 1919 Engr., Pidgeon-Thomas Iron Co., Memphis, on design and sale of small steel structures. *TT 0.1: P 0.1: RC 0.1: D 0.1.*—Sept. 1919 to Feb. 1920 Sales Engr., Ingalls Iron Works Co., Birmingham, Ala., structural steel.—Feb. 1920 to Feb. 1926 Vice-Pres. and Chf. Engr., Estes-Williams-Ragsdale Co., Memphis, being Engr. and Contr. on structural design of buildings and construction of bridges and buildings. *TT 6: P 6: RC 6: D 1.*—Feb. 1926 to date Proprietor, The F. V. Ragsdale Co., Constr. Engrs., Memphis, on construction of buildings, bridges and foundations, involving design of construction methods and machinery. *TT 3.8: P 3.8: RC 3.8: D 3.8.*—*TT 20.4: SP 0.8: P 19.6: RC 15.6: D 5.2.* Refers to R. H. Baker, N. B. Garver, H. S. Gladfelter, E. L. Harrison, J. H. Haylow, H. N. Howe, G. W. Miller, B. A. Ross, V. H. Smith.

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(5) REMLEY, JOHN FRANK, Assoc. M., Room 301, Pennsylvania Station, Baltimore, Md. (Elected March 15, 1926.) (Age 43. Born Lancaster, Pa.) 1919–1920 (evenings) student in reinforced concrete design, Johns Hopkins Univ. (received certificate).—Sept. 1905 to date with Eng. Dept., Pennsylvania R. R. Co., as follows: Sept. 1905 to June 1913 successively Chainman, Rodman, and Levelman on surveys, drafting, estimates and inspection of masonry; June 1913 to Aug. 1916 Draftsman on design of proposed railroad facilities, plans of finished structures, computations, etc.; Aug. 1916 to Dec. 1929 Transitman, in responsible charge in field on erection of Edmondson Passenger Station, Baltimore (Aug. 1916 to Feb. 1917), and freight storage warehouse (reinforced concrete and brick construction), Washington, D. C. (Sept. 1919 to Feb. 1920), extension of No. 1 track, Severn to Arundel, 6 miles of grading, masonry and track (July 1918 to Sept. 1919), construction of two 100-ft. turntables, Ivy City Roundhouse, Washington (Nov. 1920 to March 1921), Phoenix Change of Line, 2 miles of heavy grading, masonry and track (April 1922 to Nov. 1923), measuring and computing strength of steel highway bridges (Feb. 1924 to June 1925), on preliminary surveys for proposed change of line, etc. and in responsible charge in office on drafting, design of proposed masonry structures, track layouts; July 1926 to Dec. 1929 at Norfolk, Va., in responsible charge of construction of new terminals (\$4 000 000), consisting of two breakwaters, harbor dredging, bulkheads, ferry slips, transfer bridges, grading, concrete bridge masonry, 30 miles yard track, freight house, etc.; since Dec. 1929 Engr.-in-Chg., on Baltimore improvements (\$22 000 000), consisting of construction of two double-track tunnels, 14 over-head and under-grade bridges, about 20 miles new and revised track layout, concrete retaining walls, buildings, etc. *TT 20.3: SP 5: P 15.3: RC 10.3: D 5.* Refers to J. W. Craig, R. Farnham, J. F. Murray, F. L. Nicholson, C. P. Schantz, E. B. Temple, A. R. Wilson.

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(9) ROGERS, LESTER CUSHING, Assoc. M., 1616 Standard Bank Bldg., Cleveland, Ohio. (Elected Junior, Nov. 28, 1916; Assoc. M., Jan. 14, 1924.) (Age 37. Born Elgin, Ill.) 1915 B. S. C. E., Univ. of Wis. *TT 4: P 4.*—Jan. 1918 to Feb. 1919 with U. S. Army as Private, 1st Class, Sergeant and 2d Lieut., Field Artillery, 8 months overseas, 3 months as Instructor, American Anti-Aircraft Artillery School, Arnonville-les-Gonesse, France. *TT 1.1: P 1.1: RC 1.1.*—June 1915 to Jan. 1918 and Feb. 1919 to date with Bates & Rogers Constr. Co., Chicago, Ill., until Jan. 1918 as Engr. and Asst. Supt., placing concrete lining in Connaught Tunnel, on bridges, culverts, etc. for Canadian Pacific R. R., Glacier, B. C., Canada, and on construction of subway approaches, Detroit-Superior High Level Bridge, Cleveland, Ohio, for Cuyahoga County (\$750 000); Feb. 1919 to Aug. 1924 Supt. on concrete highways (20 miles) in Illinois and Wisconsin, foundations and concrete substructure for bridge over Ottawa River for D. M. T. Ry. and culverts for Ann Arbor R. R., on construction of nine subways for Illinois Central R. R., including excavation, reinforced concrete abutments, retaining walls, slabs, pavement, etc. at Champaign, Ill. (\$500 000); Aug. 1924 to date Dist. Mgr., and since 1925 also Director, in full charge of contracting, planning, organizing and execution of contracts in six states, including deep foundations for Bridge over Sandusky River for N. K. P. R. R. (\$150 000); grading, masonry, etc. (\$200 000), Ohio Junction & Fairport Yards grading, track work, concrete piles, retaining walls and five subways for grade separation work in Newark, Ohio (\$500 000) for Baltimore & Ohio R. R.; bridges and subway work on new line (14 miles) south of Columbus, Ohio (\$500 000) for C. & H. R. R.; power house, locomotive shops, store house, etc. at Hornell, N. Y. (\$500 000) for Erie R. R.; grade separation projects (\$400 000) for New York Central R. R.; Abbey Ave. Bridge, traction slabs and platforms and Ontario Street Bridging, four track subway, involving hazardous foundation work, underpinning, excavation, structural steel, etc. (\$2 000 000) for Cleveland,

Union Terminals Co.; Lewis Tunnel (3 100 ft. long, rock approach excavation), Alleghany, Va., (\$1 000 000) for C. & O. R. R., etc. *TT 14.3: P 14.3: RC 14.3: D 10.3.*—*TT 19.4: P 19.4: RC 15.4: D 10.3.* Refers to F. L. Copeland, H. A. Lane, W. Michel, W. A. Rogers, J. F. Stevens, W. A. Stinchcomb, G. H. Tinker, F. E. Turneure.

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(7) ROTHGERY, LEE JOSEPH, Assoc. M., 421 Linden St., East Lansing, Mich. (Elected March 15, 1926.) (Age 38. Born Cleveland, Ohio.) 1921 B. S., and 1927 C. E., Mich. State Coll. *TT 4: P 4.*—April to Oct. 1915 and Aug. to Oct. 1917 Rodman and Instrumentman, J. B. Davis & Son, Civ. Engrs., Cleveland, Ohio.—Jan. to June 1918 and March 1919 to Jan. 1920 Draftsman and Chf. of Party, March 1921 to April 1923 and Aug. to Oct. 1923 Res. Constr. Engr. and winters on municipal survey and design, all for Michigan State Highway Dept. *TT 3: P 3: RC 2.6: D 1.*—May 1918 to March 1919 2d Lieut., Field Artillery, U. S. Army.—Oct. 1923 to Oct. 1924 Engr. and Gen. Supt. with Townsend & Hoffman, Gen. Contrs., Lansing, Mich. *TT 1: P 1: RC 0.8: D 0.2.*—Oct. 1924 to date with Michigan State Coll., until July 1925 as Instructor in Civ. Eng. and Research Engr., and since Sept. 1925 in charge of projects, highways, concrete design, Civ. Eng. Extension; summer 1925 in private practice, sewer and street survey and design, East Lansing, Mich. and since Sept. 1925 (spare time) consulting practice with C. L. Allen Associates. *TT 6.1: P 6.1: RC 5.4: D 1.1.*—*TT 14.1: P 14.1: RC 8.6: D 2.3.* Refers to C. L. Allen, C. M. Cade, G. C. Dillman, E. D. Rich, J. H. Wasson, H. C. Woods.

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(12) RUSSELL, VERNEY WARREN, Assoc. M., 607 East Ninth, Ellensburg, Wash. (Elected July 2, 1913.) (Age 50. Born Thetford, Vt.) 1907 C. E., Thayer School of Civ. Eng. *TT 4: P 4.*—June 1916 to Jan. 1917 Engr., Montana Power Co., investigating power sites. *TT 0.6: P 0.6: RC 0.6.*—June 1907 to Dec. 1915 and June 1918 to date with U. S. Reclamation Service, as follows: June 1907 to April 1914 Engr. Aid and Asst. Engr. on construction and operation of Shoshone Dam; April 1914 to Dec. 1915 Res. Engr. on construction of 18 miles of main canal on Sun River Project; June 1918 to Jan. 1921 Asst. Engr. in charge of field work construction of Sherburne Lakes Dam and Salmon Lake Dam and Jan. to Nov. 1921 Gen. Foreman constructing Salmon Lake Dam; Nov. 1921 to July 1923 Asst. Engr. on Sun River Project, one year designing and constructing lateral system, then Acting Gen. Supt., relining main canal; July 1923 to April 1924 Office Engr., Great Falls, Mont.; July 1924 to June 1927 Asst. Engr., Kittitas Div., on field and office work, investigating Yakima Project and Gooding and Okanogan Secondary Project and office work, Yakima Project; June 1927 to date on Kittitas Div., Yakima Project, until Jan. 1930 as Div. Engr. constructing 13 miles of main canal, and since Jan. 1930 Irrigation Mgr. in complete charge of operation and maintenance of canals and construction of new work. *TT 20.2: SP 0.5: P 19.7: RC 10: D 3.2.*—*TT 24.8: SP 0.5: P 24.3: RC 10.6: D 3.2.* Refers to D. W. Cole, H. J. Gault, W. H. Nalder, P. J. Preston, J. L. Savage, C. P. Williams, W. R. Young.

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(1) SMITH, WILLIAM AUGUSTUS, Assoc. M., 107 Lake Ave., Tuckahoe, N. Y. (Elected April 16, 1918.) (Age 50. Born Zanesville, Ohio.) 3 years student, Marietta Coll.—1899 to 1902 with Pennsylvania Lines West of Pittsburgh, on maintenance and in charge of party on double-tracking and realignment. *TT 2: SP 1: P 1.*—1902 to 1903 with Lake Shore & Michigan Southern R. R. and Erie R. R., on yard construction and design at Elkhart, Ind., Collinwood, Ohio, and double-tracking, Youngstown, Ohio, to Sharon, Pa.; a short time Asst. City Engr., Niles, Ohio. *TT 1: P 1.*—1903 to 1905 and 1909 to 1915 with New York Central R. R., until 1905 in charge of grade-crossing work near New York and at Schenectady and designing track layouts, Grand Central Terminal, and after 1909 Asst. Engr. in charge of elimination work, Harlem Div. *TT 8: P 8: RC 8: D 3.*—1905 to 1906 Asst. Engr., Pennsylvania Tunnels, in charge of Weehawken shaft. *TT 1: P 1: RC 1.*—1906 to 1909 Asst. Engr. and Designing Engr., Missouri Pacific R. R., St. Louis, Mo., in charge of maintenance. *TT 3: P 3: RC 3: D 2.*—1915 to date Village Engr., Tuckahoe and Bronxville, N. Y., Town Engr., Eastchester, also in private practice building roads, sewers, bridges, drains, masonry walls, docks, etc. *TT 15: P 15: RC 15: D 15.*—*TT 30: SP 1: P 29: RC 27: D 20.* Refers to J. Downer, A. P. Hartmann, N. P. Henderson, L. G. Holleran, C. MacDonald, C. J. Parker, C. L. Spaulding.

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(9) WELLS, OSCAR, Assoc. M., 1020 Temple Bar Bldg., Cincinnati, Ohio. (Elected April 23, 1928.) (Age 50. Born Csongrad, Hungary.) 1904 C. E., Royal Hungarian Joseph Univ., Budapest. *TT 4: P 4.*—1904 to 1907 Engr. with firm, Leo Hirschler Railroad Constructor, Budapest, Hungary. *TT 1.5: SP 1.5.*—1907 to Nov. 1921 with Royal Hungarian State Rys., until 1918 as Engr. being Res. Engr. and Div. Engr. on construction and designing new rail-

roads; then Chf. Engr., being Chf. of Party tracing new railroads and in charge of construction (180 miles). *TT 14.8: P 14.8: RC 6.8: D 3.2.*—Nov. 1921, to May 1923 Draftsman, Sanborn Map Co., Pelham, N. Y. *TT 0.7: SP 0.7.*—May 1923 to March 1925 Draftsman with Francis Lee Stuart, Cons. Engr., study of belt lines in New York harbor, maps, design and estimates. *TT 1.9: P 1.9: D 0.9.*—March to Nov. 1925 Engr.-Draftsman with Walter I. Browne, Civ. Engr. and City Surveyor, Elmhurst, N. Y., calculations in subdivisional work. *TT 0.7: P 0.7.*—Nov. 1925 to Sept. 1927 Chf. Draftsman, Seaboard All-Florida Ry., in charge of Drafting Dept., Office of Constr. Engr. during construction of East Coast Lines. *TT 1.9: P 1.9: RC 1.9: D 1.*—Nov. 1927 to date Asst. Engr., The Cincinnati Union Terminal Co., in charge of studies and design for group of terminal connections, yards and viaduct approaches. *TT 3.2: P 3.2: RC 3.2: D 2.*—*TT 28.7: SP 2.2: P 26.5: RC 11.9: D 7.1.* Refers to J. M. Belknap, A. M. Bouillon, J. C. V. Christensen, J. E. Root, G. P. Stowitts, H. M. Walte, C. A. Wilson.

#### FROM THE GRADE OF JUNIOR

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(1) **BENAMI, HIRAM**, Jun., 201 East Fortieth St., New York City. (Elected July 15, 1929.) (Age 27. Born Rishon-le-Zion, Palestine.) 1927 B. S., Mass. Inst. Tech. *TT 4: P 4.*—July 1922 to Aug. 1923 Asst. Supt. with Spencer, White & Prentiss, New York City on underpinning and foundations; Timekeeper, checking materials, etc. *TT 0.6: SP 0.6.*—June to Sept. 1927 Asst. Supt., Schnare Constr. Co., road building, Mohawk Trail near North Adams, Mass.; being Engr. in charge of construction of macadam road (3 miles). *TT 0.3: P 0.3: RC 0.3.*—Oct. 1927 to April 1928 Structural Steel Detailer, American Bridge Co., Pencoyd, Pa., detailing beams, columns, etc., for tall buildings and subway work. *TT 0.5: P 0.5.*—April 1928 to Oct. 1929 Reinforced Concrete Designer and Detailer, New York City, until May 1929 with Truscon Steel Co., on design of foundations, columns, girders, etc., wall reinforcing, flat slab construction, steel joists, reinforcing for New York Harbor Anchorage of Hudson River Bridge, Brooklyn incinerating plant, etc., and after May 1929 with McClintic Marshall Co., on tables of loads, stresses, etc. for new patented steel joists, reinforcing for foundations, walls, columns for buildings, concrete bridges. *TT 1.6: P 1.6: D 0.5.*—Oct. 1929 to date Structural Steel and Concrete Designer with Gibbs & Hill, Cons. Engrs. for Pennsylvania R. R., New York City, in charge of design of steel towers for high-tension electric transmission towers; design of poles and foundations for catenary structures. *TT 1.2: P 1.2: RC 1.2: D 1.2.*—*TT 8.2: SP 0.6: P 7.6: RC 1.5: D 1.7.* Refers to C. B. Breed, D. Y. Dimon, A. D. Fields, F. Rullan, C. M. Spofford.

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(1) **BENHAM, SANFORD WEAVER**, Jun., Manville, N. J. (Elected Nov. 15, 1926.) (Age 31. Born Wheatland, Ind.) 1926 B. S. C. E., Purdue Univ. *TT 4: P 4.*—June 1926 to Jan. 1930 Asst. Engr., Research Laboratory, Portland Cement Association, Chicago, Ill., research work, studying properties of Portland cement and Portland cement concrete. *TT 3.6: P 3.6: RC 1.*—Feb. 1930 to date Concrete Engr., Research and Development Dept., Johns-Manville Corporation, Manville, N. J., studying effect of admixtures on various properties of Portland cement concrete, and on design, consisting of planning and outlining proposed investigations, designing special apparatus and equipment, etc. *TT 0.9: P 0.9: RC 0.9: D 0.5.*—*TT 8.5: P 8.5: RC 1.9: D 0.5.* Refers to D. A. Abrams, G. Conahay, H. F. Gonnerman, W. K. Hatt, F. R. McMillan, E. S. Nethercut, G. E. Warren.

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(4) **BURKART, EDWIN HOWARD**, Jr., Jun., New Britain, Pa. (Elected Oct. 10, 1927.) (Age 31. Born Philadelphia, Pa.) 1922 B. S. in C. E., Pa. State Coll. *TT 4: P 4.*—June 1922 to Oct. 1927 with Reading Co., until Oct. 1922 as Rodman on surveys, then Draftsman at Philadelphia, Pa., designing and detailing railroad bridges, etc., estimating, checking design and shop detail drawings. *TT 4.2: SP 1.2: P 3: RC 1: D 1.*—Oct. 1927 to date Sr. Draftsman, Pennsylvania R. R. Co., Philadelphia, on design and detail plans of bridge structures (stationary and movable), estimating, checking design and shop detail drawings. *TT 3.2: P 3.2: RC 3.2: D 3.2.*—*TT 11.4: SP 1.2: P 10.2: RC 4.2: D 4.2.* Refers to P. S. Baker, R. G. Develin, R. J. Lawrence, C. P. Schantz, A. R. Wilson.

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(1) **GRASHEIM, WALTER EDMUND**, Jun., 560 West One Hundred Forty-Eighth St., New York City. (Elected Oct. 10, 1921.) (Age 31. Born New York City.)—1919 B. Sc., C. of C. of N. Y. 1921 C. E., Rens. Pol. Inst. *TT 4: P 4.*—Aug. 1921 to March 1922 Tester of Telephone Circuits, Western Elec. Co., testing and checking exchange installations. *TT 0.7: P 0.7.*—April to Sept. 1922 Draftsman, American Bridge Co., Pencoyd, Pa., detailing steel. *TT 0.2: SP 0.2.*—Oct. 1922 to March 1924 Officeman in Survey Dept., Title



Guarantee & Trust Co., preparing maps from field surveys and locating property from legal descriptions. *TT 1.4: P 1.4.*—April to Sept. 1924 with Victor Mayper, New York City, as Supt. of Constr. of fireproof garage. *TT 0.5: P 0.5: RC 0.5.*—Oct. 1924 to May 1925 Plant Engr., Ewin Tile Mfg. Co., New York City, being Engr. in charge of manufacture of cement floor tile. *TT 0.6: P 0.6: RC 0.6.*—May 1925 to Jan. 1926 Designer and Draftsman, Board of Transportation, City of New York, designing, laying out and checking estimates for subway construction. *TT 0.7: P 0.7: D 0.4.*—Jan. 1926 to May 1927 Designer and Draftsman for Gibbs & Hill, New York City, designing alterations at railroad power station and general supervision of field work at power house. *TT 1.3: P 1.3: D 0.5.*—May 1927 to date Engr., Clark Plastering Co. and Building Products Corporation, estimating lathing and plastering, following up estimates, contacting architects and contractors, co-ordinating field work, purchasing material. *TT 3.6: P 3.6: RC 3.6.*—*TT 13: SP 0.2: P 12.8: RC 4.7: D 0.9.* Refers to R. P. Bolton, W. T. Chevalier, L. W. Clark, J. Feld, J. Frank, P. C. Ricketts, D. B. Steinman.

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(1) NUBAR, YVES, Jun., 196 Pinehurst Ave., New York City. (Elected Dec. 3, 1928.) (Age 31. Born Constantinople, Turkey.) Licensed Prof. Engr., New York State. 1922 C. E., Ecole Nationale des Ponts et Chaussees, Paris, France. *TT 4: P 4.*—Summer 1920 Steel and Reinforced Concrete Designer, French Govt. Rys., Paris, France, preliminary computations for grade-crossing elimination. Summer 1921 Reinforced Concrete Designer, Limousin & Co., Paris, computation of stresses in aviation hangars. Jan. 1923 to Jan. 1924 Steel Detailer with Levering & Garrigues, New York City, on office buildings and apartment houses, such as Westinghouse Bldg. *TT 1: P 1.*—Jan. to Sept. 1924 Steel Detailer and Designer with Lange & Noska, New York City, on steel structures, such as Knights of Columbus Bldg., Rochester, N. Y. *TT 0.7: P 0.7.*—Sept. 1924 to May 1925 Steel Detailer and Checker, until Feb. 1925 with Cutler Iron Works, New York City, on steel structures, such as annex to Museum of Natural History, then with Tayler Fichter Constr. Co., New York City, on office buildings and theatres, such as Madison Sq. Garden. *TT 0.7: P 0.7: RC 0.7.*—May to July 1925 Steel and Reinforced Concrete Designer, Elec. Bond & Share Co., New York City, on switchboard structures and transmission towers. *TT 0.2: P 0.2: D 0.2.*—July 1925 to date Structural Engr. with H. G. Balcom, New York City, on design and in charge (as Squad Leader) of steel and reinforced concrete structures, including Jerusalem (Palestine) Y. M. C. A., theatres, office and bank buildings, hotels, an armory, hospital, power plants, dormitory, gymnasium, etc. (some named in application). *TT 5.5: P 5.5: RC 5.2: D 5.2.*—*TT 12.1: P 12.1: RC 5.9: D 5.4.* Refers to H. G. Balcom, A. L. Kehoe, J. Loewenstein, R. Modjeski, A. R. R. Monamy, F. L. Stearns.

## 79

(1) SAGAL, MARCUS, Jun., Hotel St. George, Brooklyn, N. Y. (Elected Oct. 21, 1924.) (Age 31. Born in Russia.) 1921 C. E., Cornell Univ. *TT 4: P 4.*—Nov. 1921 to May 1924 with Illinois Div. of Highways, as Jun. Engr., and Res. Engr. in charge of construction of concrete highway and bridge work (10 miles) on Route 36, Pike County. *TT 2.1: SP 0.5: P 1.6: RC 1.6.*—May 1924 to Aug. 1928 Project Engr., Missouri Highway Comm., in charge of construction of concrete highway and bridge work (40 miles) in Montgomery, Callaway, Cooper and Coe Counties, including layout, inspection, supervision and estimate. *TT 4.3: P 4.3: RC 4.3.*—Oct. 1928 to date Constr. Engr., James Stewart & Co., Inc., layout, supervision of construction and estimates on White Plains Belmont Hotel, New York Co. Lawyers Association Bldg. and New Amsterdam Casualty Bldg. *TT 2.2: P 2.2: RC 1.1.*—*TT 12.6: SP 0.5: P 12.1: RC 7.* Refers to G. G. Blackmore, H. A. Camlin, J. Dougan, W. O. Hill, J. Rady, W. M. Spahn.

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(6) SCHLEGEL, GLENN MARCUS, Jun., 321 Hill St., Sewickley, Pa. (Elected July 16, 1928.) (Age 28. Born Los Angeles, Cal.) 1925 B. S. in C. E., Cal. Inst. Tech. *TT 4: P 4.*—July 1925 to date with McClintic-Marshall Co., until April 1926 as Structural Draftsman at Carnegie, Pa.; May 1926 to March 1927 Asst. to Plant Mgr., Carnegie Works, on structural steel fabrication; April 1927–March 1928 Designer, Eng. Dept., Pittsburgh, Pa.; April 1928–Jan. 1929 Asst. Works Mgr., Carnegie Works; Feb. 1929–April 1930 Asst. Works Mgr., and since May 1930 Shop Supt., Leetsdale (Pa.) Works. *TT 5: SP 0.4: P 4.6: RC 4.6: D 1.*—*TT 9: SP 0.4: P 8.6: RC 4.6: D 1.* Refers to E. F. Ball, P. A. Franklin, H. O. Hill, R. MacMinn, G. L. Taylor, F. Thomas.

## 81

(1) VANDERHORST, PAUL MARIE, Jun., 211 Highland Ave., Boonton, N. J. (Elected June 1, 1925.) (Age 30. Born Batavia, Dutch East Indies.) 1923 C. E., Tech. Univ. of Delft, Holland. *TT 4: P 4.*—Sept. 1923 to June 1924 with Frank B. Gilbreth, Inc., Montclair, N. J., on industrial layouts, time and motion study work in industries. *TT 0.7: P 0.7.*

**RC 0.7.**—July 1924 to March 1925 with New York Telephone Co., New York City, on investigations of additions to Central office switch-boards, etc. **TT 0.3: SP 0.3.**—March 1925 to date with Chas. Mayer, Cons. Engr., New York City, as Draftsman and Designer of high steel and reinforced concrete buildings and their foundations; also checking and being responsible for the designs. **TT 5.2: SP 0.5: P 4.7: RC 3.5: D 3.5.**—**TT 10.2: SP 0.8: P 9.4: C 4.2: D 3.5.** Refers to G. B. Andreen, J. A. Dalen, E. D. Kahlert, C. Mayer, J. C. Oblan.

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**(1) WEINER, BERNARD LOUIS**, Jun., 985 Adea Ave., New York City., (Elected Oct. 15, 1923.) (Age 31. Born Kovno, Lithuania.) 1922 B. S. in C. E., N. Y. Univ. **TT 4: P 4.**—May to Dec. 1922 Draftsman and Computer, Roger Black Co., New York City, on road and sewer work. **TT 0.3: SP 0.3.**—Dec. 1922 to Dec. 1923 Jun. Asst. in Civ. Eng., Transit Comm., New York City, acting as Instrumentman and later in charge of party on construction of railroad repair-shop. **TT 0.8: SP 0.1: P 0.7.**—Dec. 1923 to Dec. 1924 Topographical Draftsman with President of Borough of Queens, Long Island City, on drawings and design of highways, trestles, etc. **TT 1: P 1.**—Dec. 1924 to Oct. 1925 Structural Draftsman, Board of Transportation, New York City, on design and drafting on subways. **TT 0.8: P 0.8.**—Oct. 1925 to date Asst. Engr. and Designer, Westchester County Park Comm., Bronxville, N. Y., in charge of squad designing, drawing up, estimating, and writing specifications for parkway construction. **TT 5.2: P 5.2: RC 4: D 4.**—**TT 12.1: SP 0.4: P 11.7: RC 4: D 4.** Refers to J. Barnett, A. G. Hayden, R. M. Hodges, L. G. Holleran, H. E. Horstmyer.

*The Board of Direction will consider the applications in this list not less than thirty days after the date of its issue.*